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ABSTRACT

Specific procedures for assessing young children's strengths and learning needs are described in this first volume of a 2-volume manual which describes a diagnostic method of teaching preschool children. An overall introduction to the manual is followed by Chapter 2, which presents the philosophical framework of the diagnostic approach and discusses the approach as it relates to major current issues in early childhood education. Chapter 3 provides a basic framework for diagnosis and assessment of the individual child and discusses general procedures for scheduling, conducting, and recording assessment. A sample form showing a child's diagnostic records is included. Chapters 4 to 8 present detailed procedures for diagnosing children's strengths and needs in the developmental areas of large motor, small motor and perceptual-motor skills; language; socio-emotional skills; and conceptual skills. General suggestions for helping children develop in each area are presented, and specific activities which are particularly useful in developing a given skill or teaching a given concept are listed. (These activities are fully described in Volume II.) Chapter 9 explains how to use the information obtained through diagnosis over the course of the year and how to plan a program that incorporates the strengths and needs of individual children and the total group. Chapters 10 and 11 provide practical ideas for use of space and equipment, staffing, parent involvement, and children's health and safety. (Author/CM)

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volume I

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SCHOOL BEFORE SIX:
A DIAGNOSTIC APPROACH

revised edition

VOLUME I

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To

Kyllikki
Quentin and Max
Bruce and Becky
Jenny and Chip
Kurt, Katharine and Lisa
and
all the children who helped
by playing our "games"

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During the first stage of the project information about the development of preschool children in a wide range of areas was gathered and preliminary work on some of the tasks for use by teachers was done. The Research Associate in charge of data collection during that period was Lynn Duncan. Also working with the project were Sylvia Opper, Carol Menzel Viertel, Linda Olshina Lavine, Betty Paull, and Lisa Wasielewski. Special thanks are due to the administrators, teachers and children of the Fall Creek Pre-Kindergarten, the Henry St. John Nursery School, the Community Nursery School, and the Cornell Nursery School, all in Ithaca, New York, where this early work was done.

The second stage began with the modification of tasks for use by teachers, followed by pre-testing by project staff members and testing by cooperating teachers under the supervision of project staff. At the same time, activity sheets and other resource materials were being collected by staff members, cooperating teachers and others. Staff during this time included Judy Koetter, Research Associate in charge of data collection; Beverly Laforse

of the Cornell Nursery School Staff, who also served as a Research Associate; and Sue McCord; Daisy Schramm; and Miriam Taietz of the Nursery School Staff. Assistants on the project during this period were Linda Lavine, Bernice Blumenreich, and Elaine Melander. Concept tasks and activities were tested by the teachers of the Friends School in Wilmington, Delaware and in Ithaca, New York by the teachers of Henry St. John Nursery School and Head Start Center, the Ithaca Area Council of Churches Day Care Center, and the St. Paul's Methodist Church Nursery School and Head Start Center. Students from the Nursery School-Kindergarten Training Program at Cornell University also participated.

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Contributions of time and ideas have been made by so many interested teachers and students that we must apoligize if we omit someone. It would have been impossible to bring out the second edition without all of this help.

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Chapter 1
An Introduction

Why This Book?

This manual was written to try to help nursery school and kindergarten teachers[1] carry out the difficult task of giving each child the kind of school experience which he personally needs. Most teachers would like to work with each child as an individual--first finding out where he is in his development, and then planning a program for him that will help him to learn and grow in his own way. However, with the typical nursery school group of 15 to 18 children or kindergarten group of 25 to 30 and with limited help, few teachers can do more than plan a program which fits the larger part of the class and give a little special attention to the children with the greatest needs. The Diagnostic Approach is one way of trying to resolve this problem of too much to do and too little time.

There are three basic ideas behind the Diagnostic Approach:

1. A teacher of young children should help *each child* grow in *all areas*, using the child's *own strengths and interests* to help him learn.
2. To do this the teacher must have *a simple way to look at each child and to keep a record of his needs and strengths.*
3. *Teachers are individuals*, too. Each should be able to plan a program which meets the children's needs and at the same time takes into account her own way of doing things and the things she does best.

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[1] Throughout this book we use the word "teacher" very broadly. It can be taken to mean anyone who works with children and seeks to help them grow and develop.

How the Book Is Organized

Because of its size, the second edition of *School Before Six* has been bound in two volumes. The first volume (Chapters 1 through 11) is the diagnostic part of the book and describes procedures for assessing young children's learning needs and strengths. Volume II is the activity part of the book.

Volume I begins by placing the Diagnostic Approach in perspective: Chapter 2 discusses the approach as it relates to major current issues in early childhood education. Chapter 3 serves as an introduction to the process of diagnosis by discussing general procedures for scheduling, conducting, and recording assessment. This chapter also includes a sample filled-in form showing the diagnostic records of one child. Chapters 4 through 8 present detailed procedures for diagnosing children's strengths and needs in the developmental areas of large, small, and perceptual-motor skills; language; social-emotional skills; and conceptual skills. Chapters 4 through 8 also include general suggestions for helping children develop in each area and often refer to specific activities in Volume II which would be particularly useful in developing a given skill or teaching a given concept. Finally, Chapter 9 explains how to use, over the course of the year, the information obtained through diagnosis--how to plan a program that takes into account the strengths and needs of individual children and the total group. Also included in Volume I are two Chapters, 10 and 11, that do not relate directly to the Diagnostic Approach. These two chapters provide practical ideas on topics of concern to all teachers such as parent involvement and classroom safety.

The second volume of *School Before Six* is a collection of learning activities appropriate for preschool and kindergarten children. The activities are organized into chapters according to program areas, such as science, art, table games, and food preparation activities.

Revisions for the second edition of *School Before Six* included considerable expansion of the Index and additional cross referencing within the book. Each cross reference has been printed in italics and can be located in the General Index at the end of Volume I. Safety warnings also appear in italics throughout the book.

For the teacher's convencience all recording forms suggested for use and discussed in Volume I have been included in the Appendix in Volume II. The forms provided in the Appendix are blank on the back so they can be removed from the book and photocopied.

It is the authors' hope that *School Before Six* will prove to be a valuable resource book that teachers will return to again and again during the year for information about diagnosis, suggestions for teaching, and for specific preschool classroom activities. We hope also that teachers will feel free to write notes in their copies about their own reactions, experiences with the activities, or new ideas, thus making a really individualized resource book. In many places wide margins have been left for this purpose.

What This Book Is Not

The first version of *School Before Six*, published in 1970, was essentially an experimental draft. This revision after three years is based on the experience and criticism of teachers from many different kinds of programs who have used the first edition. Although this second edition incorporates many changes and is the result of a great deal of work and thought on the part of the authors and consulting teachers, we are well aware of its limitations and would like to repeat the following caution which appeared in the first edition:

> *This book is not complete.* Even as we begin to print this volume, we are aware of many last minute additions we would like to make; but we have had to stop somewhere if we are ever to get it out to teachers. We

hope that those of you who buy and use it will send the authors suggestions of additional concepts to be tested, activities to be used, books, etc., as well as your criticisms of the diagnostic method or of specific tasks or activities.

It is not original. There is so much activity in early childhood education today that there is much informal communication of ideas, with the original sources unknown. The ideas presented here were either developed by the authors or came from daily activity plans in the Cornell and other cooperating nursery schools. Whenever we were aware of the source of an activity, we have given credit for it; but in most cases we were simply unable to track it down. We have tried to avoid any use of materials where we might unknowingly violate a copyright.

It is not always right. Although we have often used such modifiers as "perhaps," "often," "it may be," this manual is full of dogmatic statements such as "The teacher *should*..." or "Children *are*..." We want to make clear here that such statements really mean "In the experience of the authors it has often seemed that the teacher gets the best results educationally when..." or "The majority of the children with whom we have worked have reacted this way...", but to have written the whole book in this way would have doubled its length. With only a few exceptions the conclusions presented are the result of intuitive interpretation by trained teachers of their own experience, rather than the results of educational research, simply because there is as yet so little research whose results provide clear and useful guides for the teacher.

Further, it cannot be emphasized too strongly that *School Before Six* should not be taken as a program to be followed to the letter, but rather as a source of ideas which the teacher can draw on and incorporate into her own philosophy and methods.

Chapter 2

Developing a Philosophy of Early Childhood Education

In this chapter we hope to place the Diagnostic Approach in perspective in relationship to the field of early childhood education today, and to give some of the thinking behind our position. We also want to outline for those who work with young children some of the choices which they will need to make if they are to develop a personal philosophy of teaching.

What Is a Philosophy of Education?

Everyone who teaches young children has certain ideas about what children are like, what they need to learn, and how best to teach them; but these ideas are often unclear or inconsistent. The ideas become a philosophy when they can be clearly expressed and when they fit together in a consistent pattern. Having a clear philosophy also requires that the teacher understand the major controversies or differences of opinion in early childhood education and decide where she stands on each.

Up until the early 1960's the main controversy about education for children from three through six concerned whether such young children should be in school at all. Many people felt that young children were better off at home during these years; others, that nursery school probably did no harm, but served no useful purpose. However, with the recent emphasis on the importance of the early years for learning, and the even more recent explosion in the demand for day care, some form of schooling for all children before the first grade has come to be considered almost essential. The controversy is no longer--*Whether* education before six? but rather--

What should we teach? *How* should we teach it? and *Who* should teach it?[1]

Differences of opinion on these questions can be found among both educators and people outside the field. In fact, everyone from congressmen to parents of children in Head Start programs has strong opinions on these subjects. It is good that this is the case. Strong opinions mean interest, involvement, and a recognition that what happens at this time is important to children.

However, while the teacher of young children is grateful to have the value of her role finally recognized, sometimes she has the feeling that everyone is looking over her shoulder and trying to tell her what to do. Occasionally she may wish for the peace of ten or twenty years ago when no one cared. She may find herself constantly under pressure from all directions to change her curriculum--to change her methods--to change her thinking about her own role as a professional. To some extent the result of such outside pressure can be good if it keeps the teacher continuously evaluating her own methods, trying to be aware of new ideas, and avoiding the boredom for teacher and children which comes from getting stuck in one way of doing things. On the other hand, the result is often that the teacher becomes confused and less effective through becoming less sure of herself and overly critical of her own abilities.

Therefore, it is important for the teacher to be aware of these major issues in early childhood education and to take a carefully thought out stand on each based on her own experience and on the individualized needs of herself and her children.

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[1] Ellis Evans in *Contemporary Influences in Early Childhood Education* points out that the questions of "Where?" and "When?" are also controversial. "Where?" relates to the problem of the responsibility for preschool education--whether public schools, other governmental agencies, private nonprofit or private business should run them. "When?" raises the question of the proper age for beginning school--three years, two years, one year, birth? The practicing teacher should be aware of these issues, but they are less critical to her day-to-day work as a teacher.

In this way she can keep a balance between rigidly rejecting or uncritically accepting anything new, and at the same time achieve a degree of peace of mind in the midst of confusion. The Diagnostic Approach tries to present a framework within which a teacher can develop her own philosophy and make use of the ideas of others in a relaxed unpressured way.

WHAT SHOULD THE NURSERY SCHOOL AND KINDERGARTEN TEACH?

The question of "What?" is basically a question of values: "What things are most important for children to learn before they start to grade school?" or, in other words, "What are our goals for children?"

At this point it is essential to clarify what we mean by "goals." This point is basic to the entire philosophy of the Diagnostic Approach. When some programs refer to "goals," they are speaking of very specific objectives which they want every child to reach by the end of the year. Such a philosophy seeks to make each child just like every other child. What we mean by a "goal" is an area of development in which we want to help a child develop to the extent of his abilities and interest.

Thus, a diagnostic approach is not a normative approach. Wanting the teacher to find out what a child or group can do in any area does not mean that we want her to find our whether they are "above or below average" in order to "bring them up to age level." Rather we want the teacher to know where each child is so that she can help him to move as efficiently as possible as far as he is comfortably ready to go--keeping in mind that all growth and learning must move in small steps, each building on the one before. For example: In presenting the color concept game, we have not given any kind of norms to tell the teacher, "Three-year-old children should know the following colors." Rather we are saying, "It has generally been found that three is an appropriate time to begin teaching colors. Some of your children will already know some. This game makes it possible to find out what kinds of experiences with color can appropriately be planned for the group, and how these will have to be modified for individual children. It doesn't matter whether they are operating at the two-year or five-year level--what is important is to help them take the next step."

Until fairly recently the controversy about goals (areas of emphasis) was often presented as a relatively simple one. One school of thought emphasized the development of intellectual skills and achievement motivation almost to the exclusion of other areas. Its supporters were concerned, for example, about the "loss of time" involved in not teaching children to read as early as possible. Another point of view concerned itself primarily with developing the child's social development and creativity. In this point of view there tended to be an emphasis on "not pushing the child--letting him enjoy his childhood as long as he can."

Both of these points of view are reactions to the typical situation for many children whose first five years indeed are wasted to a considerable extent, because their homes, their neighborhoods, sometimes even their schools, do not provide them with the opportunities to develop *fully* in *any* area. Many children are not stimulated intellectually--*nor* are they helped to live creatively and happily with other people, *nor* are they given the opportunity to use their bodies effectively in active play.

However, with the "explosion" of preschool programs, these two polar points of view have splintered into many narrower emphases, each of which tends to concentrate on one or two areas of development. To be sure, there are many, many programs for young children which have broad and flexible sets of goals; but the most publicized, the most high-pressure programs are those which are "grinding an ax"--pushing one set of goals to the detriment of all others.

Among those programs which push intellectual development or preparation for success in school there are several differences in emphasis. Teaching children skills in one or more of the following areas will be seen as the most important goal of such programs:

1. Pre-reading and reading skills: form matching, letter recognition, letter sounds, word recognition and reading of simple materials.
2. Language: use of "standard English" forms, such as proper use of pronouns, plurals, tenses, negatives, or more effective and frequent use of language.
3. Descriptive information: learning the concepts of color, weight, size, and texture; learning to describe objects in terms of these concepts; and learning general information about the world, for example, how plants grow and what mailmen do.
4. Concepts of number, classes, ordering and conservation: (While these may be taught in a curriculum stressing general information, they may also be singled out as of particular importance in some programs.)
5. Perceptual-motor: finding objects in pictures, recognizing and drawing forms, and using eyes and hands together effectively. (While not strictly intellectual, the basic importance of these skills to academic success places emphasis here.)
6. Memory, attention span and problem-solving: attacking and staying with problems and remembering what is learned.

Among programs which emphasize social-emotional development there also are several possible emphases. When social-emotional development is mentioned, one usually thinks first about learning to get along with others (and, looking at the world, it is clear that this might well be our primary goal in education if we want to survive). However, there is a much broader range of goals which have to do with relationships with other people, with attitudes toward others and oneself, and with personality characteristics. One or more of the following areas will be described as primary goals in programs emphasizing social-emotional development:

1. Getting along with others, adjusting to adults beyond the family: traditional but still frequently emphasized is the role of the first school experience in teaching respect for the rights of other children (and oneself) and in accepting teachers as helpful people.
2. Social responsibility: going beyond just getting along with others to developing an acceptance of everyone regardless of differences, and a feeling of being responsible for both other people and the environment.
3. Creativity and independence: learning to enjoy producing something on one's own and making decisions for oneself, thus gaining a feeling of competence and self-worth.
4. Learning to understand how other people feel and to express in words one's own feelings.
5. Developing specific identities and loyalties: schools may also have as a primary purpose giving children a specific identity and pride in belonging to a particular group, such as a particular race, culture or religion.

Each one of these sets of goals, intellectual or social-emotional, may be seen as important and of value. Our disagreement with most of these programs is not with what they stress, but with what they leave out. As we shall point out later, the purpose of being aware of the implicit goals of any program is to be able to judge the possible usefulness of its techniques for promoting the same goals in one's own program.

However, any outlining of goals for programs for young children is not complete without considering that centers sometimes have major functions which have nothing to do with education at all. These will rarely be found in written descriptions but often will be found in actually functioning groups. They may exist!

1. For the convenience of the parents: permitting parents to work or to have time free.[2]
2. For financial gain for the operators: as a business operation primarily, with educational goals seen as only "come-ons" to get parents to enroll their children.
3. For jobs and power for members of the community: where teaching positions and money are given out for political and not educational reasons.[2]

How Does One Make a Choice of Goals?

Below we list what we feel should be the criteria for setting goals for any program for young children.

Goals Should Be Broad.

We feel that the period before the age of six should be spent by the child in developing *all* those skills and understandings for which he is physically and intellectually ready, and which he will need to participate effectively in his role as a member of society. This means that the teacher must be sure that she is prepared to provide appropriate learning experiences in using the body (large, small and perceptual-motor), in understanding and communicating with others (language), in developing skills for coping with the demands of the environment (social-emotional), as well as in gaining knowledge about the world (concepts).

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[2] This is not to ignore the real importance of meeting parent and community needs, but only to emphasize that the needs of the children must come first.

If a teacher prefers to think in terms of one objective more important than all the others, there is one way of unifying this list--this is to see all the objectives as contributing toward one goal: that the child should come to see himself as a worthwhile human being living in an interesting, meaningful world.

Goals Should Be Relatively Specific.

It does the teacher almost as little good to know that she is supposed to help her children in, for example, "the social-emotional area" as it does to know that she should have a "broad set of goals." In order to put goals into effect on a day-to-day basis, the teacher must decide much more exactly what it is she is trying to do. For example, the social-emotional area may include a wide range of specific goals from "Initiation of activities: the child only occasionally needs help in initiation and accepts help readily," to "Feelings about self: the child has positive feelings about himself and believes that other people like him." A teacher who feels she should give the children experiences in cognitive areas is likely to stress color, number and two-dimensional form to the exclusion of the dozens of other appropriate areas, *unless* she thinks through carefully the *range* of possible cognitive goals and decides on *specific* cognitive goals for her group.

Goals Should Be Appropriate to the Children for Whom They Are Intended.

Appropriateness of goals may be thought of in three different ways. The first question is whether children of the age under consideration generally have the ability and interest to learn the skill or the concept relatively easily. We know that, with effort and expenditure of time, it is possible to teach children many things at a considerably earlier age than they would ordinarily learn them. However, when expenditure of time and energy on the part of both the teacher and the child goes beyond a certain point, the goal is no longer appropriate in that the time could be better spent on other things more readily learned.

Appropriateness must also be thought of in terms of the "optimum period" for learning a particular thing. More and more emphasis has been placed in learning theory in recent years upon the idea that there seem to be certain times during which certain kinds of things are easiest for individuals to learn. To the extent that we are able to find out when these times occur, obviously they will be the most appropriate times for setting corresponding goals for children. Fortunately an optimum period often coincides with a period of increased interest on the child's part in the particular area--providing both motive power and a clue to the timing.

Our concern about appropriateness for a particular age level should not be taken to imply that most learning should be put off to a later point than commonly recommended. In many cases we may find that children are capable of and interested in learning things earlier than we had previously thought if we apply the criteria of ease of learning and interest.

Another aspect of appropriateness does not relate to the ability of the children to learn, but to whether certain goals are, in fact, useful to a particular group of children. This aspect becomes very clear when we look at the setting of goals for various cultures. A teacher who is developing a curriculum for children in Ghana obviously will have quite a different set of recommendations than will the teacher who is setting up a school in New York state. There will be certain kinds of learnings which are not of any use to children in Ghana, at least in the specific form in which they are taught in this country; and Ghanese children will need certain kinds of skills and information which are not appropriate to American children.

For example, although the Ghanese teacher will be concerned with teaching her children the facts about weather, the study of the seasons as they progress in the United States with marked differences between summer and winter is obviously meaningless to the Ghanese child. On the other hand, a Ghanese nursery school teacher has pointed out that preschoolers in that culture need far more information about health and health problems than do American children. Very detailed knowledge of the life cycle of the mosquito is an immediate practical concern to the Ghanese preschooler who should be a help to his family in taking steps against mosquito-borne diseases.

Though differences among groups of children in the United States will not be quite so marked as those between the United States and Ghana, it is still very important to consider whether any particular set of children really needs the particular skills that we are teaching them, and whether we are leaving out certain things which are of importance to the group.

Goals Should Be Individualized.

When we discuss appropriateness of goals, we are in a sense discussing individualizing goals for a given culture or subculture. The first three criteria for setting goals--broadness, appropriateness and specificity--are related to goals which might be set for all the children of a given age in a particular setting or culture.

The next step in individualizing goals is by far the most important. This is to look at each child by himeslf, carefully assessing his needs and strengths in order to decide which goals to stress in planning for him--planning which will always be somewhat different for every child in the group. *Remember that when we speak of goals for a single child, we are still speaking of areas of development to be stressed, not rigid standards to be met.* Thus, when we say that we want to help a particular child in the small motor area, we are not setting up an expectation, for example, that he will be able to cut along a straight line at the end of the year. Rather our goal is to give him extra help and encouragement with using his hands so that he can learn to use them as effectively as is possible for him at this particular point in his development. Such an approach is normative in the sense that our decision that the child needs help is based on the fact that he does not do as well in small motor skills as other children his age. It is not normative in that we do not decide ahead of time how far we expect him to go.

It is also important to keep in mind that, while we stress the areas where the child needs particular help, we do not neglect the other areas of development. It is part of our job as teachers to provide the right kind of experiences so that the child can continue to develop also in those areas where he is doing well, even though he may be at or above the average level for his age. For example, if a three-year-old can already count to ten, we would provide number experiences for him which would permit him to move forward to the extent of his ability and interest.

In summary, the authors feel that the answer to the question of "What?" the school should teach the young child is fourfold: the program must be broad, relatively specific as to objectives, appropriate to the children for whom it is intended, and individualized to meet the needs of each child.

The Question of "What?" in a Philosophy of Teaching

We have presented above our argument for a broad set of goals in early childhood education. However, each teacher will have to decide for herself, not only how broadly she sets her objectives, but also the relative value she places on each. For example, we would hope that all teachers will include the learning of both creativity and responsibility for others as objectives in their teaching; but the stress placed on each will vary from one person to another.

Further, each teacher will need to rethink her objectives frequently, especially as she moves from one group of children to another, since each group may have new and different needs. In each new situation parents and administrators may also have different values and goals which will affect the objectives of the program. By frequently rethinking objectives, the teacher can be sure that she sets appropriate goals for each group and each child.

HOW SHOULD THE NURSERY SCHOOL AND KINDERGARTEN TEACH?

The question of "How?" can be interpreted in a number of different ways. We have chosen to approach it from two directions--first, in terms of the process of teaching and, second, in terms of the structure of the program.

The Process of Teaching

The *process* of teaching has to do with the kind of techniques used by the teacher; large group, small group, or individual instruction; direct teaching or discovery methods; the tools used--real objects, books, movies, etc.; and the types of motivation--intrinsic or extrinsic. While the teaching process is closely related to the teaching structure, which will be discussed later, it is important to emphasize that it is only occasionally tied to choice of objectives.

In deciding on a philosophy of education it is very important not to confuse goals with methods--to keep the "What?" and the "How?" separate. This is often difficult to do because descriptions of model programs hardly ever *do* separate the two. Of course there are some goals that cannot be reached by some methods; if one's goal is independent, creative children, the process of teaching cannot be rigid. But in most cases one can find a variety of teaching processes and techniques for any objective. For example, to stress language, a teacher can use group language drills, small group games, one-to-one teacher-child "verbal bombardment," telephones, tape recorders, Language Masters, or talking typewriters.

The Process of Teaching by the Diagnostic Approach

There are two basic steps in the process of teaching by the Diagnostic Approach. The first step is assessment--finding out where the children are. The experienced teacher knows in general what can be expected of three-, four-, or five-year-olds. She also knows, however, that her groups vary from year to year in their general level of ability and skill. Some teachers have said that their groups have "personality" in the same way that individual children have. For example, one year a group will be generally socially mature in terms of cooperation and sympathy for other children, while the next year a group will be immature in this respect and will require a great deal of help in developing social skills. Thus the teacher's specific goals and hence her teaching strategies for the total group should be modified each year and during the year as the group progresses. This requires some way of assessing the level of the group in each area.

In addition, within any group there will usually be a wide range of differences among individual children. By the end of the school year, a skilled teacher who is concerned with individual differences may have a fairly good idea of the needs of the individual children in her group. However, looking at children and groups in terms of individual needs requires that the teacher keep a tremendous number of impressions and anecdotes in her head, in a sort of mental filing system, and then use this information to plan appropriately for each child. Some very perceptive and organized teachers who have been working with children for a long time are able to do this, but the less experienced or less organized teacher usually finds it difficult if not impossible unless she develops a system for assessment and record keeping.

It is this kind of systematic record keeping of children's needs that the Diagnostic Approach seeks to achieve. By making a series of relatively simple procedures for checking out children in all areas and using record forms for keeping this information in an efficient way, it is hoped that even the inexperienced teacher can understand the needs of her children and plan appropriately for them.

Examples of the usefulness of such an approach can be seen in many areas. In developing the diagnostic tasks we tested the large motor skills of one group of four-year-olds in May. By that time the teacher knew very well where her children stood in this area. In fact, she was able to predict quite well how each of the children would do on the task. However, she said that she wished she had had this information clearly in mind by November or December because she could then have done far more for the individual children's motor development.

In looking at social-emotional needs, often only those children who are particularly deviant or who cause problems in the classroom are seen as needing help. By using a specific checklist of the different social-emotional areas, a teacher can easily see that children who are not "problems" can also be helped to grow in many of these areas. Often, given a closer look, the child who presents no difficulties to the teacher, is found to need help more than the "acting out" child.

In the intellectual or cognitive sphere, especially, it is practically impossible for any teacher to look at the level of knowledge of individual children in her group or even of the total group without some way of clearly assessing and keeping track of children's responses. The best that the teacher can do without some sort of systematic inventory is to know that certain children in her group are generally more advanced than others in concepts, or that the group as a whole is somewhat more or less advanced than she would ordinarily expect of this age. This leads to inefficient teaching in that for any given concept the teacher may be presenting ideas with which her group is already thoroughly familiar, or she may be teaching ideas at a level beyond what the group is really able to handle.

For example, we see nursery school, kindergarten and first grade teachers year after year having units on firemen and firehouses. Each individual teacher has no way of knowing the kinds of experiences and knowledge that her group of children already has about firemen. It is our experience that almost all children, except for the very youngest or most severely deprived, know quite a lot about firemen, firehouses, and putting out fires. This is because this area is of striking interest to children and also because teachers tend to concentrate on it.

However, we find that there are many equally important trades or professions with which children are not at all familiar. For example, some teachers will have units on food production; but in many schools this unit may be limited to a single visit to the farm--the role of the middleman, the grocery store, or the cook being practically ignored. As another example, in our mechanized, mass-production world, we find that the concept of the factory is very rarely explained to children, although most communities have facilities and experiences which could help the child to understand what a factory is and what we mean by "mass production."

Testing often shows unexpected areas of strengths and needs for both groups and individuals. For example, in the early stages of this project it was found that, although lower-class children tend to have a poorer grasp of most concepts than do professional-class children, there was one striking exception. This was in the area of money. One very bright professional-class child did very well on all of the tests involving concepts except for knowledge of money. He was not able even to name the penny! On the other hand, some of the lower-class three-year-olds were very clear as to the relative values as well as the names of the penny, nickel, dime and quarter. Thus, the teacher who is working with a disadvantaged group, and who has established that this high level of information about money is true of her children, can begin to offer experiences in this area considerably beyond those that she would offer to a professional-class group without this kind of knowledge, although this teaching situation reverses the usual ideas about levels of experiences which should be offered to certain groups.

This illustrates a very important point with regard to the tendency to make generalizations about groups by background. While the teacher who has worked with children from many different backgrounds can arrive at certain generalizations about these children, it is never fair to the individual child to say "Spanish-speaking children are...," or "Because this child is from a disadvantaged background, we can say these things about him." It has been said that language skills are not taught in the lower-class home, yet we often see examples such as the Head Start child who said to his astonished teacher on the first day of school, as he played with the toy telephone, "Madame, there is a telephone call for you on this line."

At the other extreme we certainly cannot assume that the "advantaged" child will be superior in all areas. We find children from professional homes who have large gaps in their information or in their social skills, or who have been so limited in their possibilities for motor development that they are behind in this area. In fact, the idea of "disadvantaged" applies more to areas of children's development than it does to the child as a whole. In the large city, it may be the professional-class child who has had very little chance to interact with his peers or to run, jump, hop, etc., while the less protected, disadvantaged child who plays in the streets may have more social and motor skills than does his more "advantaged" friend.

> *Thus, what we are saying is, "Look at each child as an individual in terms of all of his skills and knowledge. Don't assume that a child will be the typical child or the average child for his group. We owe it to each child to consider him as an individual, in order that we know the areas in which he needs help and what strengths and interests can be used to help him."*

The second step in the process of teaching by the Diagnostic Approach is basing the program on the results of assessment. *Obviously, most of the diagnostic time is wasted if the teacher* *then presents the children with a standardized curriculum,* whether it is an expensive, beautifully produced commercial one or an "Outline of Goals for the Kindergarten Year" handed down by the principal, *or if she merely provides standard materials and equipment without further planning or guidance.* The program *must* be planned with the objectives for the individual children in mind, and it must be highly flexible so that changes can be made as new needs and interests arise. Such program planning and such objective-centered teaching are of course far more difficult than following a rigid curriculum or leaving the direction entirely to the children. However, the teacher has a number of resources available to her. (A more detailed description is under *Program Planning, Resources.*

The Teacher's Resources

There are at least five major resources on which the teacher can draw in planning a program to meet the educational needs of her children. The most important resources for teaching are not those the teacher brings to the situation but those brought by the children; the first of these resources is the drives or motives of young children.

Motive Power for Learning

Except for some children from the most severely deprived kinds of situations, the three-year-old comes to nursery school with a number of needs or drives that provide motive power for his learning in the school situation and directions for the teacher in planning. Psychologists differ on the extent to which these motive powers are inborn and the extent to which they are learned, but for the teacher this is not important as long as she can effectively use these motivations for learning.

The drive for activity. Anyone who has watched small babies has seen that they indulge in a great deal of activity that seems to be more or less aimless to the observer--movement for the sake of movement. Watching the typical three-year-old in nursery school, we see the same kind of thing. It is difficult for most of them to sit still for very long. At rest time, for example, it is a rare group that does not contain many "wigglers." While this need for movement can be a problem for teachers at times, it can easily be channeled into productive large motor activities so that the child is learning and reducing his physical tensions at the same time.

The drive for manipulation. Human beings seem to have a strong need to do things with their hands. Again, anyone who has watched babies knows that they can be tremendously interested in putting a clothespin into a can and taking it out over and over again, or playing with their own toes or with anything else within reach. At the nursery school and kindergarten level this drive can be used in helping the child to develop the small motor skills of drawing, cutting, putting together puzzles; self-help skills such as buttoning, lacing shoes, and zipping zippers; and eventually in writing.

The exploratory drive. A third drive that is very prominent in young children, as well as in animals, is curiosity or an exploratory drive. Children want to know about everything in their environment and are often a problem to adults because of their desire to poke into things, to explore, to go into forbidden places. This drive to explore and find out, however, is one of the teacher's most important assets in helping the child to learn about his world and in teaching him important basic concepts. One of the most effective ways to introduce something new in the nursery school is to bring it into the room in a box and have a guessing game about what it might be.

While the baby and toddler are mainly curious about their immediate physical world, even the three-year-old begins to extend this curiosity into the realm of ideas. He wants to know the names of things, how objects are put together, and what happens in familiar places when he is not there. Finally, the exploratory drive can turn into the intellectual curiosity of the scientist if it has been well nourished in these early years.

<ins>The drive for social interaction.</ins> The desire to be with other people may be learned, but it appears very early. Even at three or four months, one can see babies who are happiest when someone is talking to them or playing with them. As the child grows older, he ordinarily will be active in seeking the company of children his own age, and also will enjoy the company of friendly adults. If the teacher can use the child's desire to be with others by showing him how best to get along with them, she will be laying the groundwork for satisfactory relations with others in school, adolescence, and adulthood.

<ins>The drive for production.</ins> It is most difficult to say whether or not the drive for production has inborn elements since it appears relatively late in comparison with the four other drives that we have mentioned, but it does seem to be present in many children by the time they reach nursery school. The difference between a drive for manipulation and a drive for production may be seen in the difference between the way a two-year-old and a three-year-old ordinarily approach painting. The young two-year-old is primarily interested in manipulation. He will use the paintbrush from pleasure in handling it and is often not very interested in what he puts on the paper. As the child grows older, however, he becomes more and more involved with what he is producing and less concerned with the pleasure of the movements involved. He wants his name on it, and wants to take it home to show his parents or to have it displayed on the nursery school wall.

The teacher must be creative in the ways that she uses these motivations. We have already pointed out some of the most obvious ways of utilizing drives, but the teacher should set no such limits upon herself. For example, the drive to activity may be used not only for teaching motor skills, but also to teach geometric concepts by laying out chalk courses so that children walk or skip in circles, straight lines, or curves; waiting in line to walk the balance board can be used to teach the idea of taking turns; simple calisthenics can teach following directions; and suggesting that children think of different ways to get from one place to another can encourage creativity.

Motivating the Child

As something of a digression, but an important one, this list of motivations brings up one of the most controversial questions in education today--how best to motivate the young child to learn. One approach holds that the most efficient way to help children learn is to give concrete rewards, either food or the privilege of doing some special activity, for doing what the teacher wants. Reactions to this point of view have been violent and widespread. Its opponents have pointed out that by "paying" children to learn one makes it impossible to achieve one of the major goals of early childhood education--helping children to become self-directive, to gain satisfaction from the accomplishment of a task, and to build inner controls. The authors of this book strongly agree that this latter goal is far more important than any other goal which may be achieved by the method of paying for performance. Further, we feel that the child's own motivations, which we have listed above, and the intrinsic interest of a good curriculum make extrinsic rewards or payments not only undesirable but also unnecessary for almost all children. One might almost say that payment for performance is an easy way out for teachers who are not willing to put in the effort or planning necessary to provide a motivating curriculum.

However, as stated earlier, we feel that something is to be learned from any program or point of view. The Behavior Modification school of thought has made two important contributions which no teacher should ignore. First, this school has brought to our attention that we often reward behavior which we do not want to continue, that by our very attempts to change behavior we only increase its frequency. We often reward attention-getting behavior not with food, but with attention, thus making more likely that it will occur again. (For further discussion of this point see *Acceptance of Limits and Routines.*)

Second, there are some children or some problems where the more usual techniques and motivations do not work. These would be children from very atypical home situations, or disturbed or severely retarded children who do not have the same set of motives as the normal child. Problems which cannot be solved by usual techniques are likely to have had many different sorts of approaches used inconsistently, with everyone in the situation having become very emotional. In such cases, concrete rewards may need to be very carefully used as emergency measures, as long as there is the clear understanding on the part of the teacher (and on the part of the child, if possible) that these emergency motivations will be replaced as soon as possible with more productive ones. Thus we see these payments not as "bribes," but as ways of helping a child to gain control over himself.

The Interests of the Child

The second type of resource which the children themselves bring is their individual abilities, strengths, and interests. If the teacher really believes that the best motivators for learning are the children's basic drives rather than artificial rewards or punishments, she will want to plan her program taking into account what a particular child does very well and enjoys.

Thus, a child who loves art activities but is very immature in social relationships may be helped to be more comfortable with others and to develop social skills through involving him in cooperative art activities, first with one nonthreatening child and later with a diversity of children. One child who had actively resisted participation in any of the concept games was found to be interested in any topic so long as it involved music or singing.

Almost always there are ways to approach each child so that eventually he can come to enjoy and learn from most areas of the program.

On the various diagnostic forms and on the Needs and Plans Sheets for each child, space is provided for information about these individual strengths and interests to be sure that the teacher keeps them always in mind.

The Creativity of the Teacher

The third resource which the teacher has in developing her program is her own creativity and imagination. There is a tendency, even when a teacher begins by considering seriously her own objectives and the motivation of her particular group of children, to use more or less standard kinds of activities to achieve her objectives. However, if the teacher approaches a given problem with no preconceptions as to necessary equipment, supplies, or techniques, the results can often be the development of fresh and effective teaching methods.

Creative, energetic teachers who have worked with groups of migrant children or as members of the Peace Corps in underdeveloped countries have met educational objectives with no more equipment than the teachers could improvise from materials available in the homes of the participating children. For example, it is possible to develop small motor skills through activities such as dropping small rocks into small holes cut in the tops of cardboard boxes, through finger plays, and other improvised games. Children can gain a good sense of melody and rhythm when their teacher simply sings to them and encourages them to sing back, or provides sticks or shakers made out of boxes filled with rocks for the children to beat time. A teacher can provide experience with many kinds of concepts through cutting out pictures from magazines, from storytelling when no books are available, or even from tracing patterns in the dirt with a stick. Fingers are always available for learning number concepts as are rocks, small twigs, and all kinds of things in the world of nature.

Obviously, working with nothing and making a first-rate school program requires not only great imagination and creativity, but a great deal of effort as well. Hopefully, most teachers will be able to provide basic kinds of equipment and materials for the children; but even the teacher with an unlimited budget can do a better job if she uses her imagination. The more her group varies from the traditional upper-middle-class nursery school, the more a teacher *must* innovate to provide a program that meets the needs of the children. Any kind of group, however, can benefit from the teacher's creativity in meeting basic objectives in new ways.

The teachers who worked on this manual approached innovation from two directions--from the goals to be taught and from the challenge of materials. And, as usually happens, they found themselves most productive when thinking as a group. Coming together to discuss the teaching of concepts about textures, for example, each brought in one or two ideas; but these ideas quickly were elaborated, modified, or added to as the group began to discuss them. From the other end, someone might bring in some new piece of junk--a styrofoam meat tray, for example--and the discussion would center on how it might be used to meet a variety of objectives.

While most teachers do not have this amount of time or number of fellow professionals for program planning, thought of this kind and discussion between teachers, assistant teachers and trainees is essential for planning a program which is suited to the needs of the group. Further, the staff will find far greater satisfactions from teaching which takes into account their own interests, skills and needs as well as the children's--rather than teaching from a set curriculum devised by someone else. *The special abilities of the teachers (or of volunteers or parents) can add a whole new dimension to the program.*

The Experience of Others

This is not to say, of course, that the teacher seeks to innovate every possible aspect of the program herself. The extensive activity section of this manual was written precisely because the authors believe that the fourth resource of any teacher is the experience of others who have worked with preschool children before her.

The traditional nursery school equipment is there because educators have found that it best meets the needs of most children of this age. It is likely to differ from equipment found in the children's homes by being sturdier, designed with safety in mind, and simple and versatile so that it encourages a wide variety of creative play. The junglegym, for example, not only develops muscles and climbing ability, it also serves as a focus for social interaction and as a setting for imaginative play. It may be a firehouse, a boat, or a tree for children who for the moment are firemen, sailors, or monkeys.

The traditional kinds of activities in nursery schools were planned originally because they helped children to develop in areas appropriate to their age level. Easel painting, large brushes, and large sheets of paper, for example, encourage large motor activity and creativity while the paint boxes and painting books frequently found in children's homes do not. Storytelling brings all kinds of new concepts to the child, and at the same time increases his attention span and his language skills.

The new teacher has a number of sources for obtaining information about equipment, materials and activities. If she has been trained in a teacher-training course, she will have had lectures, readings, and practical experience in this area. If she is learning on her own, she can go to books such as this one on nursery school and kindergarten teaching, to specialized books on literature or music for young children, to journals in the area of childhood education; or she can observe and talk with more experienced teachers. Equipment catalogues from school supply companies often give new ideas. Many of these resources are listed more specifically in the Appendix.

Here is the point at which knowledge of some of the programs mentioned earlier may be very helpful. *A teacher does not have to agree totally with either the goals of a program or its methods in* *order to learn from it and use activities developed by it.* The process of taking something from one approach and something from another has been called "eclecticism" and is often frowned upon by those who prefer to follow a narrower point of view. However, we feel that a teacher's program can be far richer if she can make use of all the knowledge and insights available to her, so long as she *knows exactly why* she is using a particular activity and feels free *modify it to fit the needs of her children.* For example, many non-Montessori schools use Montessori materials, but in different ways.

The Child's Parents

The fifth resource of the teacher (but not fifth in importance) is the interest of the children's parents. In Chapter 11, which includes a discussion of parent involvement, we point out that the opposite point of view might be taken. That is, the teacher and the school may be seen as only two of the resources on which the *parents* draw for their children's education. (See *Parent-School Cooperation.*)

The Structure of the Program

As we said at the beginning of the last section, the decisions which a teacher makes regarding the *process* of teaching will affect the *structure* of her program. However, one does not completely dictate the other. Structure usually refers to three things: the type of daily schedule, the amount of free choice of activity which is left to the children, and the limits which are set on the children.

In a highly structured program, all of the children's activities would be directed by the teacher, with both the materials to be used and the way of using them specified. There would also be many rules as to what children should and should not do. This extreme was seen in some of the pre-1900 American kindergartens where, for example, each child had his own set of little table blocks to be used in the same way and at the same time by everyone.

A very unstructured program would give children almost complete free choice--when, where, and how to use materials provided. Some programs for very disturbed children try to do this. Practically speaking, however, complete lack of structure does not exist, since even the original choice of materials and equipment implies some control by adults. Further, some limits are always set on permissable damage to other people and objects; and some time limits are set on the length of the program.

Few teachers or parents would want either of these extremes. Most see that a completely structured program leaves no room for helping children learn to make decisions and think on their own, and no chance for taking into account the special needs of each child. The course of complete freedom, on the other hand, fails to provide guidance and direction to a child's learning and can result at its worst in a classroom dominated by chaotic and destructive behavior.

The first alternative presumes that the child brings nothing to the learning situation other than his physical presence. The second presumes the same of the teacher. However, if we see learning and teaching as a cooperative venture to which both child and teacher bring strengths and resources, an intermediate degree of structure becomes appropriate. Within the intermediate range there is room for great individual difference in the structure of the program.

How does the teacher decide what level of structure is right for her and her children? It depends on several factors.

Primary in determining structure is the type of teaching process which the teacher prefers. If she sees the teacher as playing the primary role in determining the goals and planning activities, she will want to have a number of periods each day during which children are expected to take part in certain types of activities. There may be defined periods for music, art, language development, and motor skills. The teacher will probably also have more expectations as to limits such as children being responsible for their own cleanup, using materials in certain areas only, or not running ahead on walks. Within this framework, however, she need not teach in a rigid, punitive or unimaginative way. Her choice of activities may be appropriate to both the children's needs and interests, and may provide leeway for considerable individual choice of activity within any given period.

On the other hand, some teachers feel most comfortable in highly informal situations. In such a classroom there is little pre-planning, few or no defined periods, and no expectations that children will do certain types of activities at certain times. This type of teacher will probably tolerate more noise, messiness, and general confusion. However, this kind of classroom can also be good educationally if the teacher has a broad background of knowledge and resources and is unusually responsive to the teaching possibilities which arise spontaneously.

The typical teacher is somewhere in the middle. The extent to which teachers feel comfortable with more or less planning, more or less structure, more or fewer limits seems to be a basic personality characteristic. No one way is best for everyone.

On reading further in this book it will become obvious that the authors occupy a middle ground in this respect (though no two of them would probably run a classroom in exactly the same way). A Diagnostic Approach to teaching requires a schedule which permits a great deal of free choice for children because only in this way can an individualized program be provided with time for each child to work on his own areas of need, at his own pace, and motivated by his own interests. On the other hand, as we have seen, the Diagnostic Approach holds that the teacher has the responsibility to assess where the child is in each area of development and to see that he is given the opportunity to grow in all areas. Therefore, we also feel the need for some more structured periods during the day for purposes of assessment and for purposes of more direct teaching of appropriate and interesting materials.

We recognize that it is quite possible to assess and plan for children in a very informal situation; but it is much more difficult, especially under less than ideal conditions.

Another factor influencing structure is the physical setting and amount of staff. Too small rooms; inconvenient bathroom facilities; outdoor space which is not fenced, which must be shared with others, or which is at a distance from the school; limited supplies and equipment; and not enough teachers all may require greater structuring of one or more portions of the schedule. Any one of these conditions may require setting up certain rules about the way and time that things are to be done which would not otherwise be necessary. For example, if there is limited staff and the bathroom is far from the room, young children will have to be taken to the bathroom in groups, rather than going by themselves without asking as they could if the bathroom were off the playroom. If space for artwork is limited, there may need to be a limit on the number of children in the art area at one time. However, in every case teachers should try to be alert to ways of solving problems with as few rules and restrictions as possible.

A third factor affecting program structure is the individual differences of children. Different children seem to do best with different degrees of structure. A mature, innovative, and responsible group may be able to be highly self-directive in planning and carrying out their own activities, while a less mature group may seem to be happier and to learn more with greater teacher direction. Individual children may need more direction than the majority of the children in the group, especially if they are shy and hesitant about entering into play or if they are hyperactive and easily overstimulated. Perhaps the teacher's best approach is to start the year with a slightly more structured program than she really would prefer and to loosen the schedule as she finds that children can cope.

The Question of "How?" in a Philosophy of Teaching

As with the question of "What?" it is important for a teacher to be clear as to how she wants to teach and, if possible, to be able to justify her stand to herself and others. This means that she will want to come to decisions on the following questions:

1. To what extent is assessment of and planning for individual needs important to her and how will she go about it?
2. What kinds of motivation will she use in the classroom?
3. What particular strengths does she possess which may affect the way she plans her program?
4. To what sources will she turn for activities and other program materials?
5. At what general level of structure does she operate most effectively (recognizing the need for some flexibility depending on the situation)?
6. What specific kinds of expectations does she want to set for children?

WHO SHALL TEACH?

As we said in the first chapter, in the broadest sense, the answer to "Who?" is that everyone who works with or near a child *is* a *teacher*. If a child asks the janitor, "Why do you put that stuff on the mop?" he is learning something--whether the janitor answers him in detail and invites him to smell the cleaner or just grunts and turns away. The same thing is true of the child's experiences with everyone he meets in the classroom from the cook to the director of the center.

However, the disagreements about who shall teach are on a somewhat different issue. Within the past twenty years, we have

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gone full cycle on this question. Before the boom in preschool education started in the 1960's, the majority of teachers of three- and four-year-olds did not have specialized training. This was because the low status and pay of the job attracted very few girls to training. At the same time parents rarely felt that it was important to have trained teachers for very young children. Then, with the sudden emphasis on the need for intellectual stimulation in the preschool, there was a shift to the other extreme and the goal became two trained teachers in every classroom, with the assistant teacher in her first year out of a four-year college program or a graduate of a child care program in a high school or in a two-year college. While most programs never even approached this goal because of the lack of trained people, it was seen as desirable. Further, during this period the status and pay of teachers was raised; and many more teachers were graduated.

Now in the last few years, as a result of the push for community control and parent involvement, the movement has again been back to more untrained people in the classroom--often without even a trained director in the center. While the small town Head Start center of 1968 might have no trained staff because they could not obtain them, a present-day urban day care center may reject available trained staff because they are not relevant.

Qualifications for Teaching

The authors strongly believe that the answer to the question "Who shall teach?" should not be based either on paper qualifications or political considerations, but rather on proven ability and knowledge--knowledge of young children, knowledge about planning and carrying out educational programs, and the ability to work with children and parents. The necessary qualifications will vary, of course, with the job level--director, head teacher, assistant teacher or trainee (usually called aides)--but each should have or be actively gaining skills and knowledge. (See *Staff, Qualifications* for a more detailed discussion.)

This point of view places obligations on the person who is already working with young children or who would like to do so to evaluate her (or his) own strengths and weaknesses, not to accept a position for which she is not qualified, and to work continually to learn and grow as a teacher.

Directors, principals or boards hiring staff should feel equal obligations. The first obligation of an administrator is to try to find people who will be good teachers. To discover them requires not only looking at training, experience, and written recommendations, but whenever possible to see them in action. It may be possible to observe an applicant working with children in her current job; if not, it is desirable to talk personally with someone who has actually observed her. For hiring staff without experience, it is sometimes possible to establish a waiting list for trainee positions, and to bring those on the list into the classroom as extra helpers or substitutes in order to evaluate their potential. When it is not possible to find staff with adequate qualifications, as often happens, plans for further training should be discussed at the time of hiring.

Administrators should also be responsible for continuing evaluation of all staff once hired and for actively helping them to improve their teaching skills, in order that they may move up the ladder to the next level of position. Staff should be promoted as their competence increases and as soon as positions become available, regardless of either paper or policital (social class, color, sex or who they know) qualifications. (Further thoughts on training are described under *Staff, Training.*)

Standards for hiring, continuing evaluation, and training imply further the occasional necessity for making decisions about firing. Making such decisions is a third obligation of administrators. If after considerable time and help in learning the necessary skills for a given level the staff member is not able to do an adequate job with children, she should not be retained as a teacher.

(Usually the inability to handle such a job is a question of personality characteristics; many people with the ability to do well in other kinds of jobs just do not have the patience, flexibility, or interest to meet the difficult demands of day-to-day work with young children.) When the decision is made that a staff member should not be kept in the classroom, the next question is always whether there is a place for her on the staff outside the classroom. If not, the administrator has a clear responsibility to explore with her the reasons why she is not suited for classroom work and alternate career possibilities. We realize that the question of how badly the staff member needs the job must enter into the decision made by any administrator who cares about people; but the final decision must be based on the good of the children, not the needs of the staff.

Who Makes Educational Decisions?

A question related to "Who shall teach?" regards the decision-making process. Here the question is not who shall do the actual teaching, but who shall decide what and how to teach. We do not have the space in this volume to go into this question in detail, but we feel that teachers should be alert to the kind of question about decision-making responsibility they need to ask when looking for jobs.

Ideally we feel that the decision-making process should be a joint one. The basic philosophic viewpoint should be set by the administrators and parents in cooperation, and then explained to and accepted by the staff member when she takes the job.[3] From then on the decision making on a day-to-day basis should be the responsibility of the teacher, though she is free to consult with administrators and parents when she has a question or feels in need of help.

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[3] Sometimes guidelines are also set down from above, as in Head Start, franchised programs, or where the public school system imposes a statewide curriculum.

However, in many teaching situations this ideal condition does not exist. The teacher is either bound to teach from a prepared curriculum, or worse, finds herself in the position where every move she makes is subject to criticism from administrator, parents, or both. The former situation is most likely in a public school system, the latter in a parent-controlled school; but both can be found in any setting. It is essential that the teacher clearly understands the conditions of the job before she takes it.

The Question of "Who?" in a Philosophy of Teaching

First, every teacher should honestly face her feelings about necessary qualifications for teaching. We have presented here our conclusion that it is ability to work with children that counts, not education, age, social class, color, or sex. However, each person needs to decide what her values are and the practical meaning of these values for getting along in the classroom. For example, if a director, would she be willing to promote on the basis of ability, not education? If a woman, would she be willing to work as an assistant teacher with a male head teacher (or vice versa)? If a black, would she be willing to work under a white head teacher (or vice versa)? The purpose of facing feelings on such questions is to realistically decide either to avoid situations where values may be challenged or to change the attitudes--not just to pretend that they do not exist.

A second decision that teachers must make relates to decision-making responsibility. Each teacher must decide just how much (or how little) supervision she feels comfortable with, or at least can tolerate. As we have already pointed out, our whole philosophy of education rejects the role of teacher as accepting a detailed curriculum given to her by someone else. However, many available positions will be offered under exactly these terms. In deciding whether to accept a given position, each person will have to decide the amount of freedom which she requires in order to work effectively.

(In the case of economic necessity she may decide to gamble on being able to make some changes in the system from within.)

On the other hand, it should also be recognized that supervision has its supportive elements as well. A new teacher may want to seek a situation in which others will take somewhat more responsibility for planning and decision making while she is learning so long as there is basic agreement on philosophy and on what is good for children.

Summary. In this chapter we have tried to point out some of the basic philosophical questions in the field of early childhood education. We have also tried to present the philosophical framework of the Diagnostic Approach, as presented in the remainder of the book. While we have emphasized that each teacher must make her own decisions and develop her own philosophy, we would hope that all teachers reading this book will find some ideas or ways of working with children which they will find useful, whatever their philosophy of education.

Chapter 3
The Diagnostic Approach

Contents of this chapter. In Chapter 3 we provide a basic framework for assessment of the individual child. This includes suggestions on general record keeping and on the scheduling of assessment procedures. There are also some general comments and cautions about the use of any kind of diagnostic techniques. Only general procedures for assessment and use of the diagnostic forms we provide are presented in this chapter. Specific procedures for testing and suggestions for teaching in the areas of motor skills, language, social-emotional development, and basic concepts are presented in Chapters 4 through 8.

Different Ways to Use These Materials

As we will say over and over, there is not just one Diagnostic Approach which is a set, rigid way of assessing children. Rather, each teacher will want to set up an approach which fits her own needs and those of her children. The materials in Chapters 4 through 8 can be used in any one of the following ways.

Gaining ideas for teaching. Although the activities at the end of the book will probably be the most used resource for teaching, the suggestions at the end of each diagnostic section in Chapters 4 through 8 will also be helpful. To find these most easily look in the index for the page number of the topic of interest. For example, suggestions for teaching geographical concepts are listed under *Geography, General Suggestions*. However, many teachers have indicated that they enjoy just skimming through the diagnostic section, stopping to read wherever something catches their eye.

Reading for general information about assessment. While many teachers feel that they do not have the time or interest to keep diagnostic records on each child, they want to keep in mind the developmental needs of all their children. Such teachers have reported that they read this section carefully to be sure that they cover all important areas of development in their program planning, and to help with informal assessment of individual needs. (See also *Assessment in Large Groups*.)

Using the diagnostic procedures for individual diagnosis and planning. Note that this is not an all-or-none approach. A teacher may want to use some procedures and not others, may want to modify the techniques to fit her own needs, or may want to try the total approach once to see how it goes.

Cautions to Observe in the Use of Any Assessment Materials

Whatever approach is used to assess, whether a part or all of the Diagnostic Approach, a standardized test, or just informal observations, there are certain dangers which the teacher should be aware of, and certain cautions which she must observe.

Avoiding failure experiences for the child. As we say over and over again in this manual, the first concern of the teacher must always be the child's own picture of himself. If, in the course of finding out what he needs to learn, we make him feel less adequate as a person, we will have done more harm than good. Throughout the manual there are very specific suggestions for avoiding failure experiences in the testing situations.

Most important is an attitude on the part of the teacher which sees the results of tests or checklists, not as successes or failures, but rather as a record of what the next learning goals for a particular child will be. A teacher who says to a volunteer or parent, "Mike doesn't know his colors, can you help him?" is emphasizing the negative--"putting Mike down." However, if she says instead, "Mike is working on learning about red and green," everyone, including Mike, can feel good about the situation. From the point of view of the child, the tests should be games like any other learning experience in school. As far as the checklists are concerned, he should not be aware that he is being evaluated.

Confidentiality. If results of assessment are put in positive learning terms, there is no particular point to keeping them secret. Everyone who works with the children needs to be aware of areas where help is needed. However, when the results of assessment point to possible problems which may be serious or require outside consultation, this information should be discussed first with the parents and if necessary with outside consultants. (See *Medical Conditions*.)

Obviously much of the information that is obtained by talking with the mother or with the child himself, while often very pertinent to helping the child in school, should not be general knowledge. Thus only the immediate staff should be aware if the child is upset over the severe illness of a grandmother or if things are very tense in the home because of the father's unemployment. For this reason, none of the children's records should be shown to outsiders or left lying about where they can be read by anyone who comes into the room, even though in most cases no harm would be done. In cases where really confidential information is involved, such as the fact that a father may go to prison or that a brother has leukemia, it should be kept in the teacher's head and nowhere else. Of course a teacher should discuss the development of the children with other mothers or casual visitors only in very general and positive terms. She might say, "Yes, Maria is really very coordinated," but never "That child has a terrible problem sitting still."

Setting Up Records

Whenever possible, a manilla folder with each child's name on it should be prepared before school starts. This may be an ordinary manilla folder, or if the money is available, a colorful folder with a pocket on each side. This makes it easier to avoid losing materials and provides one side for records and one side for keeping miscellaneous items such as samples of the child's cutting and notes from home. Described below are the normal records which should be kept for each child. (Examples of some possible forms are included in the Appendix.)

Face sheet. This would include the most critical information which may be needed from day to day and which must be kept current such as addresses, telephone numbers, etc.

Medical, field trip, and photograph permission slips. Most schools may not need photograph permission slips, but if there is any possibility of having children's photos appear in the local newspaper, a brochure for the school, or a movie made for research or demonstration purposes by a local university, it is much better to have permission first rather than trying to track down a parent for permission two years later.

Developmental history. Many schools will want more information on a child than can conveniently be included on the face sheet. This would include facts which might alert one to possible educational problems such as the fact that Patricia had a difficult birth, or information about special concerns of the child which might affect his adjustment in school, such as the fact that Owen is very attached to an old stuffed rabbit. The amount of such information wanted will vary with each school and the questions listed in the Appendix are only intended as a starting point. However, many developmental records ask for much material which is not likely to be useful except for possible research purposes. Since the completion of such a form may be a real burden for the mother if written, or may take up too much of the teacher's time if it is to be filled out in an interview, keep it as brief as possible.

In some cases the school will ask the parent to fill out the form herself, but it is very good if the teacher can go over it with the mother or both parents. This makes it possible to clear up doubtful points, and it also has the value of letting the teacher get some idea of how the mother feels about the information and perhaps do some teaching and interpretation on the spot. For example, when her mother reports that Julie sucks her thumb, the important thing is not the fact of thumb-sucking, but whether the mother is accepting or embarrassed and upset about it. Or, on finding out about Owen's stuffed rabbit, the teacher may learn that the mother does not intend to let him bring it to the day care center, even though he has always napped with it. Here the difficulty for a child of having to make two major adjustments at one time could be interpreted to the mother.

Because of its length and because each school will undoubtedly want to set up its own version, we have not presented the developmental history in a form which can be photocopied. However, a suggested list of questions are given in the Appendix as a starting point from which each teacher or school can work.

Anecdotal record sheet. This is a plain sheet of paper on which the staff notes anything of importance which happens during the course of the school year. Anecdotal records tend to have a bad name because they are so often filled with trivia, especially if there is a policy that something must be written there every week or every day. This is not only a pointless waste of time, but also tends to bury anything which is really important. The anecdotal record sheet might well include the following kinds of information:

1. Information and impressions of the home visit, such as how the child reacted to the teachers, to his mother, or to any brothers and sisters.

2. Behavior on the first few days of school.
3. Special interests, friends, likes, and dislikes which show up at school (foods, activities, books, children).
4. Important contacts with parents or other relatives.
5. Informal contacts with others, such as doctors, dentists, etc. (Formal referrals and reports would be separate.)
6. Progress in various areas of development as the year goes on.

A sample anecdotal record for a hypothetical child is included in this chapter. Typically the record is full of entries early in school with relatively few added later. It is particularly important to see that adequate entries are made early in the year because the teacher does not know the children well at this time and cannot possibly keep in her head all the personal idiosyncrasies of each child. Yet an entire morning can be disrupted by such little things as Brigit's hatred for orange juice or the fact that Peter is frightened of snakes.

There should be some place on each record for flagging important points, along with possible medical problems such as allergies, so that everyone will be aware of them. However, less critical information may still be important. For example, knowing that Lisa is very fond of her baby sister or has a rock collection at home may provide a clue for a new interest for her when she seems bored or at loose ends.

It will be noted that the anecdotal record, being just for the teacher's use, need not be in complete sentences or even grammatical. However, it should be legible so that others can read it; and each item should be dated and initialed.

ANECDOTAL RECORD Cynthianne

Home and Community Contacts

9-9 Mother wanted no home visit because of work hours, will bring C. to school at 9 on the 11th. LC

9-20 Called mother to try to find out why C. is so unhappy at school Mother didn't know, says she's a "funny kid," but wants her at school to learn something. X

11-18 Contacted mother to talk about C's progress (have been sending home artwork and notes). M. didn't seem to be concerned about social-emotional needs, but seemed pleased to report that C. tells her stories and sings songs that she learns in school!!! X LC

1-5 Mother did not come to conference, says she will come in later in spring when the weather is better. X

2-5 Visited mother in hospital to ask if we could help in any way. Much more responsive than ever before--commented that she wishes she had more time with C. She is very tired when she gets home and has all the housework to do. I suggested that she and C. might do some of the work together because C. is very good at work projects, and enjoys having everything clean and neat. Also suggested trying to read one story each night before bedtime--it would take only a few minutes and give both something to look forward to. Mother will try it, and we will send books home. I will pick up C. each morning until mother is well. X

3-3 Mother called to say that story reading is working out well. We need not send any more books because she and C. now go to the library on Saturdays. X

5-30 Conference. Mother is very happy with all that C. has learned. We talked about her need for an understanding teacher next year. The family is moving and mother wants us to write new school to ask for special help for C. X

WRITE PINE VALLEY SCHOOL, PRIDHAM, N.C. IN AUGUST

School

9-11 School visit: Mother and C. sat almost without moving or talking during visit. No exploration of school at all. LC

9-20 During first week C. mostly sat in cubby or at edge of room. No response to many attempts to interest her in play with others. No participation except juice. X

9-27 Suddenly started coming to the table and using crayons, magic markers and table toys. Does not like to stop. Still avoids other children. Does not like anything messy. LC

10-26 Interested in cooking sessions and participates as long as she doesn't have to get her hands dirty. Try cooky frosting. X

11-17 Red letter day! C. played in the sand and gave Maria a sand cake. LC

12-10 Two more signs of progress: C. came to me for comfort when she got a paper cut, and seemed very happy making her mother's Christmas present. Continues to play with Maria. X

1-10 Came back from vacation with a smile. Will sometimes take part in small group time. Must be careful not to push. X

2-5 Sudden relapse to old C.--no smiles, sitting in corner. Baby-sitter says mother is in hospital. X

2-7 Suddenly accepts my holding, rocking and reading to her. Talked about her fear that mother won't come home. X

2-12 Mother is home, C. much happier. Has been initiating play with Yukiko and Golda, "reading them stories." LC

5-2 Miss X. and C. made a birthday cake for me and had a surprise party. LC

5-30 Have helped mother arrange day camp for C. I will visit there and send post cards to N.C. in the fall. X

Needs and Plans Sheets. One of the most frequent complaints in the questionnaires received about the first edition of *School Before Six* was that too many pieces of paper were involved. Some schools did not have typists or ditto or mimeo machines to reproduce the forms involved. In others the teachers just did not like shuffling all those papers. In this revision we have cut down drastically on the number of record sheets for each child's folder. Further, we have included a blank copy of the three Needs and Plans Sheets in the Appendix which can be photocopied if no typist or mimeo machine is available. (However, if it is decided to use any form for more than one year, it will be much cheaper in the long run to have all forms typed and run off on mimeo.)

Briefly looking at the sample Needs and Plans Sheets included in this chapter, it can be seen that the top of the right-hand side of the first page is a summary of the needs, strengths, and plans for all areas. The summary was placed in this position to make it as easily accessible as possible. The first sheet also includes the large motor tasks, with space for recording the child's performance on the left and space for planning for motor skills on the right.

The second Needs and Plans Sheet is the record of the child's small motor skills and a record of the brief individual testing session in which the teacher looks at the child's ability to draw and match forms; his ability to classify; and his concepts of color, number, and body parts. The individual session was introduced in this revision of *School Before Six* because of the need which many teachers felt to have a more careful assessment of the child's development in those areas than they had been able to get in small group sessions. (See Chapter 7 for specific procedures for the individual testing session, and see Chapter 4 for the diagnosis of motor skills.) In addition, page two of the Needs and Plans Sheets includes space at the bottom for noting the child's special interests, strengths, and knowledge of other concepts. However, many teachers prefer not to use the Needs and Plans Sheets for recording knowledge

NEEDS AND PLANS--1

LARGE MOTOR NEEDS AND STRENGTHS

General Coordination

Very awkward	Somewhat awk.	Adequate	Very good
	✓ ↔	✓	

General Interest

Avoids	Some interest	Adequate	Strong interest
✓			

General Caution

Very fearful	Overly cautious	Adequate	Somewhat careless	Very careless
	✓ (Heights)			

Walking on the Line

Very wobbly	Some balance problems	Frequently off line	Smooth, mostly on line
			✓

Walking Boards

	Very wobbly	Balance problems	Steps off	Walks smoothly
4"				✓
2"		✓	✓	
	Refuses	Wants hand	Hesitant alone	Confident
6"		✓		

Jumping off Chair

Refuses	Wants hand	Alone cautious	Confident	Wild jump
	✓			
Sits, slides	Steps off	Jumps one foot ahead	Two-footed jump	
	✓			

Jumping over Lines

Steps	One-foot jump	Feet togeth. short	Adequate
		✓	

Running			**Hopping**		
Awkward	Somewhat awkward	Smooth adult	Cannot	2 or 3 only	Hops well
	✓			✓	

Skipping			**Stair Climbing**		
Can't	Gallops	True skip	Does not alternate	Alt. up only	Alt. both
	✓			✓	

Ball Throwing

Wild	Gen. direc.	To catcher	Under 6'	Over 6'
		✓	✓	

Ball Catching

Fearful	Usually misses	Often misses	No accom.	Uses body	Uses hands
		✓		✓	

Child Cynthianne

Age 4yr6mo Date Oct. 5 Teacher LaCord

SUMMARY OF PLANS

11-15 Top priority must be given to helping C. accept teachers and other children. Use her interest in art, table activities, and food to try to develop relationships. (Start with non-threatening children such as Maria and Yukiko but watch for interest in others). Avoid conflicts by not making sudden demands on C.

She also needs help with developing interest in large motor activity, fear of heights, initiating dramatic play, becoming more comfortable with messy activities and using language in social activities, but all of these will need to wait on social-emotional progress.

12-20 Use developing relationships with Maria and Miss Xavier to help in areas listed above, but *don't push*.

2-15 Continue to work on socio-emotional needs by encouraging all positive and responsible behavior and interaction with other children. Focus on ball play, reading activities, and small group projects of any kind.

LARGE MOTOR PLANS

11-15 C's coordination is adequate, but she does not enjoy large motor play and is somewhat fearful of heights. Because of her social emotional needs, do not push her to join activities, but watch for any interest and encourage it.

12-20 Try to use friendship with Maria, who has begun to enjoy obstacle courses to lure C. onto them. Start with everything *on the ground*.

2-15 Encourage ball play. Continue to pick up on Maria's interests as C. still follows her. Try to extend C's current interest in "copying game" to gymnastics. (C has become both more interested and less fearful gradually.)

NEEDS AND PLANS--2

Child Cynthianne
Teacher LaCord

SMALL MOTOR NEEDS AND STRENGTHS

General Coordination

Very awkward	Somewhat awk.	Adequate	Very good
		✓	

General Interest

Avoids	Some interest	Adequate	Strong interest
			✓

Cutting

Can't cut	Slashes only	Choppy	Fairly smooth	Smooth on line	R L Alt.
				✓	✓

Buttoning and Unbuttoning

Cannot	Awkward	Adept
		✓

Zipping and Unzipping

Awkward cannot start	Adept cannot start	Adept and starts
	✓	

Drawing Grip

Hammer	Crude opposition	Adult	R L Alt.
		✓	✓

Drawing Control

Very awkward	Fair	Adult
		✓

Drawing Position

Top	Tip	Inter.
		✓

INDIVIDUAL TESTING SESSION 11-5 (not very cooperative, but obviously interested in materials ?)

Counting
Objects counted 7 Rote counting 12

Body Parts (N: Names, R: Recognizes)
Eye N Ear N Nose N Mouth N Arm N Hand N
Fingers N Leg N Foot N Toes N Elbow R
Wrist NO Shoulder NO Ankle NO Cheek R

Sorting "Flowers go together, not with those"
Forms matched All Pictures sorted All

Colors (N: Names, R: Recognizes, M: Matches)
Red N Blue N Yellow N Orange N
Green N Purple R Black R White R
Gray M Brown M Tan M Pink R

Copying Forms (attach sheet)

Circle	Cross	Square	Triangle	Diamond
✓	✓	Almost		

OTHER CONCEPTS (Use back as necessary.)

11-15 C does not take part in concept games, except to watch.

SMALL AND PERCEPTUAL-MOTOR PLANS

C. has good small and perceptual motor skills and enjoys art projects and almost all table toys. Try more advanced matching and classifying games and be sure that more difficult puzzles are available when she is ready for them.

CONCEPT PLANS

Although C. does not respond in small group sessions she gives the impression of being interested and learning since she does not respond to any approach which involves questions or direct teaching, try helping with numbers and colors by informal comments in art and cooking activities.

12-20 Suggest that C. sit next to Maria and help her when she does not understand the teacher.

2-15 C. has gradually come to participate in concept games, though she still has days when she does not want to talk. Curious and quick to grasp ideas, she needs little special help with concepts.

Now - knows all colors, can count objects to 15.

INTERESTS, STRENGTHS, AND OTHER IMPORTANT INFORMATION

Very good at art and small motor activities and will stay with them for long periods of time.

Very interested in food and cooking.

Mother works, C. goes to sitter where there are no other children, after school.

2-15 Note new and very strong interest in words, books and learning to read.

SOCIAL-EMOTIONAL
(Refer to long form of checklist as you rate. Add brief notes to give more complete picture.)

	Definitely needs help	Could use help	Adequate	Strength
Initiation of Activity (at beginning stayed mostly in cubby - now moves easily into solitary play)			✓	
Attention Span				✓
Curiosity (I think she is very curious, but does not act on it very much)	?			
Frustration Tolerance and Problem Solving (Adequate with objects, very low in social situations.)	✓			
Producing and Creating			✓	
Dramatic Play (Avoids doll corner, block play or any activity with other children)	✓			
Relationship with Teacher (Avoids whenever possible, can be hostile.)	✓			
Limits and Routines (Goes along with most but does not like to stop what she is doing. little group participation)		✓		
Interaction with Children (List Names) (Only when they get in the way, then yells or hits)	✓			
Rights of Self and Others	✓			
Sharing and Taking Turns	✓			
Self-concept	?????			

LANGUAGE
(Refer to long form of checklist as you rate.)

	Definitely needs help	Could use help	Adequate
Understanding			✓
Amount of Language Use	✓		
Use of Sentences			✓
Intelligibility (Speech is clear and correct but rarely speaks except to ask for something)			✓

Language spoken at home: English

Child Cynthianne

Teacher LaCord

SOCIAL-EMOTIONAL PLANS

10-22-79 C. seems to want to keep a wall between herself and the world. She does not seek or accept children. Readily asks teachers for things she wants, but usually ignores them. If children take her things or get in her way, or if teachers ask her to stop what she is doing she yells and occasionally hits.

Plans. Try to develop relationships through her interest in food or art. Watch carefully for positive signs and respond to any, but dont push. Avoid problems with routines by warning her well ahead of transitions.

Try to put other children next to her at table and cooking projects who will be friendly and non-aggressive (try Anne, Yukiko, Maria). Watch for signs of interest.

Talk to mother for possible insights into problems.

12-20 Developing relationships with Maria and Miss Xavier. Use these to help her accept others but dont push.

2-15 Now accepting several girls as individuals or in small groups. Encourage with small group art projects such as mural painting, embroidery frame. Avoids boys. Try to involve with Jose who is non-threatening. Other teachers should try to reduce dependence on Miss X. but carefully.

LANGUAGE PLANS

Listen with obvious attention whenever C. says anything, especially rare spontaneous comments, but dont push production until more comfortable with group.

12-20 Suggest that C. can help Maria with English (Lotto, naming games, language copying) thus helping both with language.

2-15 Has begun asking letters and words can recognize some. Very interested in books and stories. Encourage.

of concepts other than those covered by the individual testing session. (See *Record Keeping, Concept Games* for an alternative method of recording concept knowledge.)

The third Needs and Plans Sheet is a summary of social-emotional and language needs and plans. Teachers filling out this page will need to refer to the long forms of the Social-Emotional and Language Checklists and the more detailed descriptions of each item which are presented in Chapters 5 and 6 on language and social-emotional diagnosis.

Note that the first Needs and Plans Sheet involves assessment in small groups, the second sheet mostly individual assessment, and the third page observation by the teacher without involving the child directly. It is therefore efficient to keep the pages separate, with the child's name at the top of each. The date at the top will be the date on which the particular assessment took place. When it was done on two or three successive days, it is not necessary to indicate this. When there were several days between one task and another or the rating was done by different teachers, the date and initials of the second teacher can be indicated in the margin. A sample filled-in form is shown.

One important suggestion with regard to the Needs and Plans Sheets should be made. In the long run it will probably save time and energy if one copy of the forms is used for noting responses to the testing materials and then recopied onto another form for the planning session and inclusion in the child's folder. This gives all the space on the right-hand side to use for scribbling notes while observing the child and means that one can concentrate on the child during testing, rather than on neat notation. If a teacher is extremely neat and well organized, of course, her first copy may be adequate. In any case, the third page (Social-Emotional and Language Checklists) will probably be all right in first copy.

Scheduling Assessment

Obviously the process of learning about each child starts even before the teacher sees him for the first time, when she talks with the mother to enroll him in school; and it continues throughout the early days of school. Most teachers, however, prefer waiting to fill out the diagnostic forms until both they and the children have settled into the routine of school. By then the teachers will have a little more time to devote to looking carefully at individual children, and the children can be expected to behave in a way which is more typical for them than at the beginning of school. Further, teachers will have learned a little about how to motivate each child.

The exact time and order of assessment thus will depend on the individual teacher and classroom. Many teachers find that they are able to start after about two weeks of school and often begin with the large motor tasks, which are attractive and easy to rate. If the obstacle course is set up during free play time, most of the children can usually be checked off in two mornings in a typical nursery school group, three or four in the usual size kindergarten. Following this, approximately a week might be spent on assessing small motor skills, again by having the materials out during free play time, and rating from three to six children each morning.

Sometimes teachers will find it possible to do the Social-Emotional and Language Checklists during the same weeks as the motor tasks, especially if they teach in a half-day school and have adequate time for going over their findings in the afternoon. However, it is very important not to rush the process, and in most cases it may be better to spend the following two to three weeks on the Language and Social-Emotional Checklists. If the teacher observes something of importance but fails to note it, the observation will be of little value. In most of the procedures we have suggested that the teacher either make rough notes on the form or keep a pad of paper in her pocket for making notes which will jog her memory later when she wants to write a more complete description. If she tries to look at too many children in one session, her penciled notes will have little meaning. Especially in the social-emotional and language areas, the staff must also allow some time after looking at a small number of children to compare notes and come to a joint conclusion.

In a typical situation, diagnosis, except for the individual testing and concept games, would be complete about six weeks after the beginning of school. This does not mean, of course, that teachers would wait six weeks to begin planning for individual children or not do any concept teaching until that time. (See *Program Planning Throughout the Year.*)

At this point, which in many schools would be about the first week in November, many teachers will schedule the individual testing sessions, often testing two or three children a day until everyone has been seen. At the same time, they will either begin or continue with the use of concept games in small groups to assess and teach other concepts.

As the staff member who was doing the individual sessions finished with each child, the total staff would hold a planning time to discuss the needs of that child and to write up plans for him. If it is possible to test one child each day in the nursery school or two per class in the kindergarten and to discuss five children in each weekly planning session, this process could be completed in about a month. (It is recognized that a teacher in a two-session kindergarten will have problems with assessment; this is discussed in the final section in this chapter.) Finally, sometime around midyear and again at the end of the year, informal re-assessment might take place.

Looking at the sample Needs and Plans Sheets for Cynthianne given earlier in this chapter, it will be seen that the large motor testing was done early in October, followed by small motor testing, with the Social-Emotional and Language Checklists being completed by the end of October. The individual testing sessions were carried out during the first two weeks in November and conferences began the middle of November. Because the group considered

Cynthianne to be one of the children needing the most help, she was one of the first to be discussed; and a follow-up planning meeting was held just before Christmas. A midyear reevaluation was made on all children in the middle of February and notes made on the Needs and Plans Sheets. However, to avoid duplication the end-of-the-year assessment was recorded only on the Kindergarten Report Form. (See Chapter 9.) Other comments and informal plans for Cynthianne appear on the anecdotal record sheet.

As noted earlier, some teachers may have completely different schedules for the procedures. If in a day care center, where children enter year round, they may develop an informal schedule of focusing on each child as an individual for one week after he has settled in, using all the procedures and checklists within a few days and following with a planning conference at the end. The teacher of kindergarteners or a competent group of fours who have been in school before may decide to begin focusing on concepts almost from the beginning of school and to do the social-emotional, language and motor testing a little later. (It is important not to put them off too long, however, because it is in picking up those problems which are not immediately noticeable that these checklists are of the most help.) In a class with many children who seem to have difficulty adjusting, the Social-Emotional Checklist might come first.

Assessment in Groups with Many Children and Too Little Staff

The kindergarten teacher with two groups of 25 to 30 children each day will usually not be able to carry through a detailed program of diagnosis such as we have just described for each one of her fifty or more children, except in the rare case where she is given extra help and support by her principal. The teacher in an overcrowded day care center will also have problems. This does not mean, however, that she will need to give up on individualizing her program and always treat the class as a total group. By using a simplified screening approach the teacher can still find the children who need help most in each area, and by making use of a combination of open classroom and small group techniques she can still plan to meet individual needs.

Such a teacher, reading over the kind of testing and record keeping which we have been suggesting, may want to develop her own diagnostic procedures. However, in very brief form below we suggest some techniques which might be used. (One advantage which the kindergarten teacher has over the teacher of threes in diagnosis is that it is possible to expect more group activity and cooperation from five-year-olds.)

Large motor. The teacher can take advantage of outdoor play time to make a rough observation of the children in free play. She may bring out balls and encourage ball play, informal races, and play on the available play equipment. As she watches, she will make notes on a sheet on which are already listed the names of the children.[1] Those who are obviously well coordinated and reasonably cautious can be marked with a check. A few children will clearly be seen to be awkward in movements and lacking in skills; these can be marked with a minus. A number may not become involved in large motor skills at all and these will rate a question mark. On the following day, the teacher can either set up an obstacle course if materials are available or initiate games involving walking on chalk lines, hop scotch, jumping rope, etc. and try to involve those children who had not entered into spontaneous play or who had seemed awkward the previous day. By the end of two or three days of such observation, the teacher should have a fairly good idea of which children need her help in developing interest, ability, or caution in large motor activities, and which children may eventually need to be referred to the school nurse if their coordination does not improve. She will also know which children especially enjoy large motor activities and note this as a possible motivator.

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[1] Many teachers find it helpful to make up a ditto at the beginning of the year with the children's names listed on the side. These sheets can be used for scheduling parent conferences, visits to the nurse, etc. as well as for diagnostic procedures.

In grade schools with a special physical education teacher, her help may be sought in finding children with special needs, if she is used to working with such young children and does not set unreasonably high standards for them.

Small motor and perceptual-motor. These skills might be tested together by taking six or seven children at a time during a free play period and asking them to copy the forms and cut around circles. As the children worked, the teacher could check off those who used a pencil and cut adequately, looking at the way in which they used their hands as well as the resulting drawings or cutouts. While she would not be able to observe the process which each child went through to copy the forms, and hence would lose some information, the finished copies would tell her which children probably need help in this area most.

Language and social-emotional. Since these checklists involve only listening and watching, it should be possible for the teacher to use them in basically the same form as the teacher of smaller groups. By choosing two or three children each morning or afternoon to watch particularly, and by making brief notes on a pad of paper at the time, or immediately after the children leave, the teacher should be able to find those children who particularly need help in either area. Again it will be important to observe more than once children about whom there is some question, and whenever possible to have a second observer to check out the teacher's observations.

Concepts. The teacher may find it possible to give the individual testing session by having one child come early or stay late each day until it is completed. If not, she may be able to have one small group session each day in which she looks at the concepts she feels are most important with a group of five or six children, thus seeing all children in the course of a week. Whatever her limitations of time, however, each teacher should be alert to any evidence she can get as to the appropriateness of the level of concept teaching which she is doing, both to the group and the individual.

Record Keeping. If she is able to do any individual assessment, no matter how informal or brief, it is essential for the teacher to record it on a useful form for each child. One possibility might be a single sheet divided down the middle, with pencilled comments regarding needs, strengths, and interests on the left side, and equally informal comments as to plans on the right side. (See *Program Planning in Large Groups.*)

Summary. This chapter has served primarily as a summary of record keeping and as an introduction to the actual diagnostic procedures, with some suggestions as to scheduling. The next six chapters give more detail about the procedures, how to interpret children's performance, and suggestions for teaching in each area. Finally, in Chapter 9, Program Planning for the Individual and the Group, we discuss the process of putting all this information together in a coordinated program.

Chapter 4
The Diagnosis and Teaching of Motor Skills

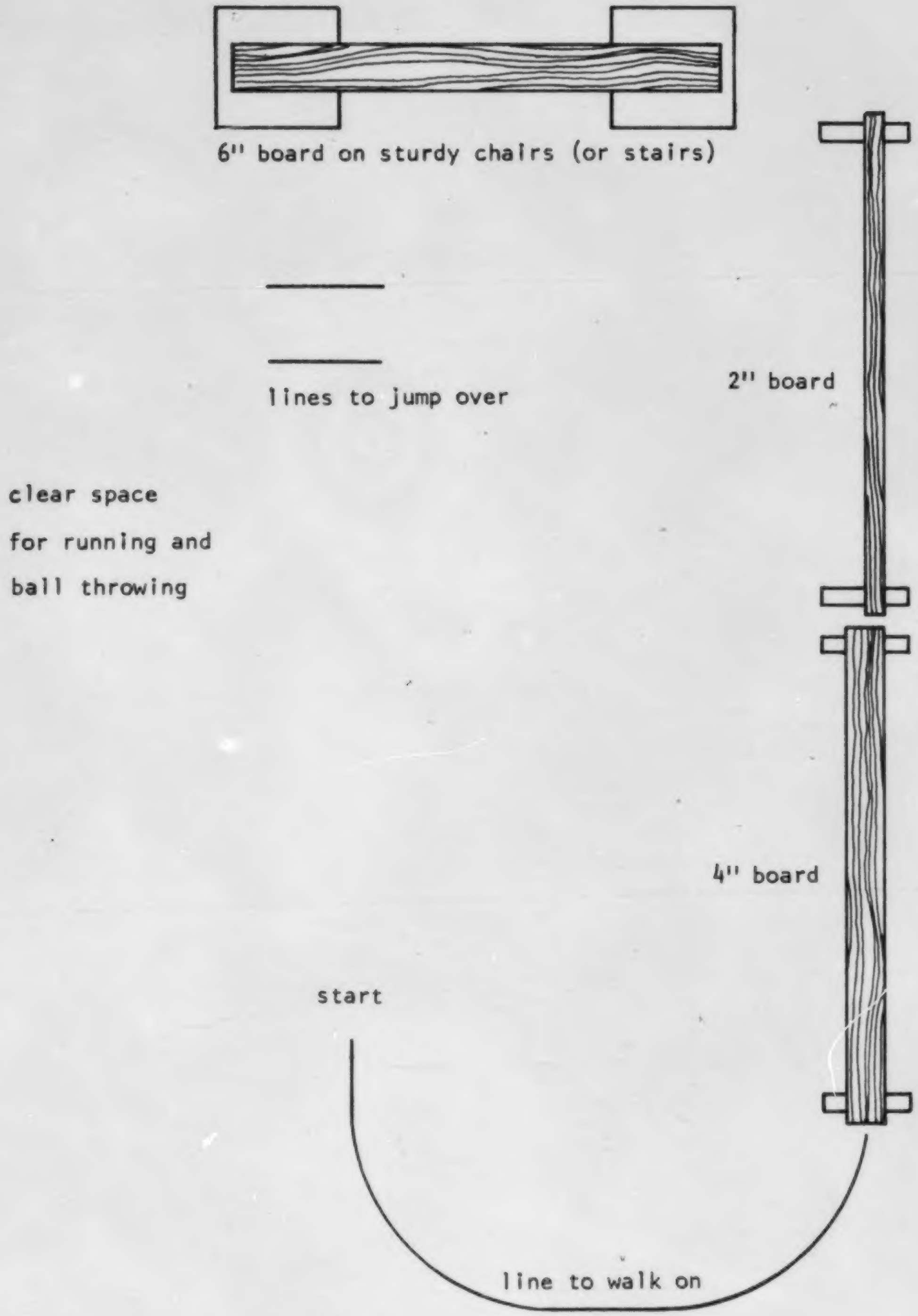
LARGE MOTOR SKILLS

In the first version of this manual, both the materials and forms for large motor testing were more complicated than necessary; and both have been simplified. The major concern of the teacher is not nearly as much in specific skills as in the overall level of coordination and interest in large motor activities. The most important goal of the testing, then, is to identify those children who need special help in using the various parts of their body together, who need help in balancing, or who are fearful or overly careless. Beyond this, it should be noted when children could use practice or special help in such activities as ball throwing or jumping; but this is not so important as the overall impression.

Setting Up the Testing Situation

The testing requires space either inside or outside for a small obstacle course, with a free area at least ten feet wide and twenty feet long for running, hopping, and skipping. The obstacle course may be laid out in any shape to fit the space available, but it should be set up in the order indicated. A diagram is shown of one way to set up the course. The obstacle course consists of:

1. A line about six feet long, straight at one end and curved at the other, either made from a piece of brightly colored yarn taped to the floor or sidewalk or drawn on the sidewalk with colored chalk. (Chalk does not work too well on floors as it rubs off when children walk on it.)


6" board on sturdy chairs (or stairs)
lines to jump over
2" board
clear space
for running and
ball throwing
4" board
start
line to walk on

Sample arrangement of obstacle course

2. A walking board four inches wide and six feet long, made from a 1" x 4" piece of lumber. (This is not actually 1" x 4", but what lumber yards call 1" x 4" "nominal"; if you ask for 1" x 4" "actual," it will cost a lot more.) Nail a foot-long piece of 1" x 4" to each end of the board to make it more stable and raise it slightly off the ground. (Nailed together pieces tend to come apart; if you intend to continue to use the board on the playground, use screws and paint with enamel.)
3. A two-inch walking board, six feet long, made by nailing a 2" x 2" "nominal" to 1" x 4" braces at each end. (This board may be omitted if you are testing threes or young fours.)
4. A six-inch walking board, six feet long, made from a 1" x 6" "nominal," placed across two *sturdy, stable* adult chairs.
5. Two lines drawn with chalk or taped down with yarn, about one foot apart for jumping over.
6. A brightly colored ball eight or nine inches in diameter. (Note that this is somewhat smaller than the typical playground ball, but is easily found in the dimestore or supermarket. This size is suggested because we found children had difficulty in catching a larger ball with hands only.)

As can be seen, the equipment for testing is very simple and should not come to over four or five dollars, less if the two-inch walking board is not made. While a volunteer may be found to make the boards, any teacher can order:

1. One 1" x 6" board six feet long.
2. One 1" x 4" board six feet long.
3. One 2" x 2" board six feet long.
4. Four 1" x 4"boards each one foot long.

at the local lumberyard and nail them together herself in a few minutes.

General Directions for Testing and Recording

As noted before, the testing may be done either indoors or out so long as there is clear space for running. The major question to be decided is how the children will be divided up for the testing. It does not work to line up all the children and let them go over the course, one after another. Even with one teacher supervising and the other recording, it is not possible to observe each child's performance carefully enough. In addition, there will often be times when the teacher will want to ask a child to do something again, which is not possible with a group. We found two alternatives which seemed to work fairly well, the choice depending on the physical setup of the school.

One alternative is to set up the obstacle course in a place away from the group such as on the playground or in a gym when the group is in the classroom, or in the classroom when it is not in use, and to take two or three children to the course at a time. The other alternative is to set up the course on a part of the playground or gym while the total group is using it, but to mark the testing section off in some way so that only the child being tested will be in the area. The children waiting their turn should have a special place to sit. Since children usually find the whole process very attractive, and the testing of an individual child only takes about three minutes, the waiting usually presents no problem.

A teacher who becomes familiar with the procedure may be able to check running, hopping, and skipping with two or three children at once, or throw and catch the ball, throwing to three children in turn; but she should be careful never to let the pressure of the waiting children keep her from carefully observing and noting the results for each child. If there are only two children waiting as in the first alternative, they may play ball with each other; if several children are waiting but restless, the teacher should suggest that they come back later. If the other children cause problems by insisting on running into the testing area, they should be firmly diverted by another teacher.

We found that, with this simplified procedure, a teacher could easily give directions, observe, and take notes at the same time if she has the first page of the Needs and Plans Sheets on a clipboard with a pencil attached on a string. The clipboard could easily be tucked under one arm while following a child around the obstacle course and could be put down on the chair while ball throwing. As each child finishes, his form can be moved to the bottom of the stack on the board. This procedure requires, of course, another teacher to supervise the rest of the play area.

Specific Directions for Testing and Recording

Usually no introduction is necessary if a child has seen another child being testing previously. If necessary, the teacher can simply say, "We have some walking and running games to play." If the child does not want to take part, the teacher can suggest that he do it after his friend. If he is still hesitant, the testing should be put off until another day. No child should be pressured to participate; but since we have had almost no refusals in our testing, it can be assumed that a child who does not want to participate when given several chances, or assurance of support if he seems fearful, probably has some problems in this area, and will need to be observed carefully in other large motor situations.

Instructions are only suggestions and need not be memorized. However, they should be kept as simple as possible. Points which we found necessary to emphasize are in italics.

For each large motor skill, make a check mark in the box that applies to the child. Whenever it is felt that a child is not really trying, note this.

Walking on the Line

Testing. "First I'm going to walk with my feet right on the line." (Demonstrate, keeping feet centered on line.) "Now you try it." If the child has balance problems because he is going too slowly or if he steps off the line through going too fast, suggest that he try it again and go faster (or slower) this time. Emphasize, *"Keep both feet on the line."*

Recording.

Very wobbly	Some balance problems	Frequently off line	Smooth, mostly on line
______	______	______	______

Very wobbly: The child has serious problems with balance, wobbles back and forth or almost falls, even if he keeps both feet on the line.

Some balance problems: Child wobbles a little or may hold arms out to sides to balance.

Feet frequently off line: Child steps off with one foot or the other at least three times, even on the second trial. (This may be double checked with "very wobbly" or "balance problems.")

Smooth, mostly on line.

Four-Inch Walking Board

Testing. "Now see if you can walk across this board without stepping off." If child steps off, suggest he try again more slowly or faster depending on the problem.

Recording.

Very wobbly	Balance problems*	Steps off	Walks smoothly
______	________	_____	_______

*See definitions above.

Two-Inch Walking Board

Testing. "Now try this one, it's a harder one." Suggest a retrial if appropriate. If the child seems concerned about his inability to walk it, say, "That is really a pretty hard one, but you almost did it."

Recording.

Very wobbly	Balance problems	Steps off	Walks smoothly
_____	_______	_____	_______

See definitions above.

Six-Inch Walking Board on Chairs

Testing. "Now let's see you climb up on this chair and walk on this board." *Be absolutely sure that board or chairs cannot slip.* If child is hesitant, offer your hand. Then, after he has walked across once holding your hand, suggest that he walk back by himself. If he still refuses, say, "That's all right, it is pretty high up, isn't it?" In the rare case where the child will not go across even with hand held, put the board on the floor for a success experience.

Recording. Note that we are primarily interested in caution here. In the rare case where the child has problems walking the six-inch board on the floor, write this in. The other categories should be clear.

Refuses	Wants hand held	Hesitant alone	Confident
______	______	______	______

Jumping Off Chair

Testing. After child has walked across, say, "Now let's see you jump off *both feet together*." If the child wants his hand held, do so, and note.

Recording. The blanks here reflect both ability and caution.

Refuses	Wants hand held	Alone but very cautious	Confident	Wild jump
______	______	______	______	______

Sits down slides off	Steps off	Jumps, one foot leading[1]	Two-footed jump[1]
______	______	______	______

Jumping Over Lines

Testing. Say, "Now show me how you jump over these lines. Keep *both feet together*." If he steps over or cannot jump total distance, suggest he try again, emphasizing feet together.

---

[1] Jumping implies that the child springs forward or upward rather than just stepping or falling off.

Recording.

Steps	One footed jump[2]	Feet together but short	Adequate

Running

Testing. Say, "All right, now let's see you run. Run over to (some specific place such as the junglegym or an 'X' taped on the gym wall) and run back."

Recording. Judge quality of coordination and note specific problem if any.

Awkward	Somewhat awkward	Smooth adult

Specific things to look for and note are flopping of arms, toeing in, toeing out, running on tiptoes, or running with feet wide apart.

Hopping

Testing. "Now hop over there; hop on just one foot." Demonstrate if necessary.

Recording.

Cannot	Two or three only	Hops well

---

[2] Jumping implies that the child springs forward or upward rather than just stepping or falling off.

Skipping (Omit for threes)

Testing. "Now let's see you skip." *Demonstrate*. If a child is hesitant or concerned about failure, reassure, "I know it's hard; why don't you just try?" or "That was fine. Skipping is hard."

Recording.

Cannot	Gallops	Skips
______	_______	_____

Stair Climbing

Testing. Test separately. Observe children going up and down stairs (holding the handrail if they ordinarily do so).

Recording.

Does not alternate	Alternates up	Alternates both
_________	_____________	__________

Ball Throwing and Catching

Testing. This can be scheduled at another time or done immediately after the obstacle course. Test no more than three children at once and record immediately before testing another set. Place the child or children on a surface hard enough to permit bouncing, backs to a wall or other object. (This permits the teacher to control the distance.) From a distance of six feet, toss the ball gently to one child and ask him to throw it back. If he cannot catch a tossed ball, try gently bouncing it next time. If he tosses violently or wildly say, "Try to throw it right to me." Take each child in turn and then return to the first. If the child stands without making an effort, suggest that he hold out his arms. If any child catches or throws reasonably well at six feet, move back to eight feet and repeat. *Practice ball throwing alone first. The teacher must be able to throw accurately for a child to catch. If a child is hit in the face when the teacher tosses to him, he is bound to act fearful of the ball the next time!*

Recording ball throwing.

Wild	General direction	To catcher	Under six feet	Over six feet
____	________	_______	________	________

Recording ball catching.

Fearful	Usually misses	Often misses	No accomodation	Uses body	Hands only
______	_______	______	____________	____	____

Fearful: Refuses, or fends off ball.

Usually misses: Child does not get arms up in time or holds arms so that ball falls through them most of the time.

Often misses: Misses more than half the time.

No accomodation: Child holds arms out and may "catch" ball, but is completely passive. Catching depends on teacher's skill in tossing the ball into his arms.

Uses body: Child actively catches, using arms and body and is successful more than half of the time.

Uses hands: Child uses hands only for catching and is successful more than half of the time.

General Impressions

Before going on to the next child, rate general coordination, interest, and caution on the basis of performance on all the tasks. These categories are listed at the top of the large motor testing section on the first Needs and Plans Sheets and are self-explanatory. However, the teacher may not feel that she has enough evidence to rate either caution or interest on the basis of these tasks alone and may want to leave a question mark in order to observe the child more carefully during free play period. (Usually the fearful child or the one who avoids large motor activity will show up on the testing, but a child with strong interest or lack of caution may not.)

General Suggestions for Large Motor Abilities

Our major concern is to help each child develop interest and enjoyment in activities which involve the use of his whole body, or to maintain and increase the interest which he already has. This means that, no matter how awkward or lacking in special skills a child may be, the teacher should avoid any high-pressure tactics which may cause him to avoid large motor play in the future. To interest children in large motor activities the teacher can provide a great many different kinds of activities, both inside and outside; and for the particularly resistant child she can try to start with areas where he already finds enjoyment. Thus she would not only spark interest with a variety of different obstacle courses, gymnastic and group games which most children enjoy, but also would try out such activities as pushing doll carriages along chalk lines or painting murals for children interested only in doll or art play.

For the child with adequate interest but very poor balance or coordination a teacher would use the variety of obstacle courses and gymnastics mentioned above, plus variations of play on the balance beam and games involving walking on lines, cracks, or squares. (See specific activities listed below.)

When trying to help a fearful child, the teacher also must find intriguing activities but add support at the beginning, gradually increasing the difficulty and decreasing support as the child becomes more comfortable. For example, the teacher can offer a walking plank at first on the ground, then raised higher an inch at a time. The teacher would at first provide a hand to be held, then walk next to the child, and finally just be available for moral support. For the careless child, interpretation of the reasons for rules plus pleasant reminders may be enough; if not, the teacher may try first giving him responsibility for helping to enforce rules and then if necessary restrict him from activities where he endangers himself or other.

As we noted above, our primary concern is with general coordination and interest, not with specific skills. However, below we give a rough guide to what might be expected of children at various ages and ways in which the teacher might want to give help.

Walking lines and boards. Three-year-olds who are really trying, and are going neither extremely slowly or quickly, can usually balance fairly well and walk both the line and the four-inch board without stepping off more than once or twice. Fours can often manage both without a misstep. Fives can often walk the two-inch boards with one or two missteps or none at all. Children who cannot perform at these levels are probably lacking in general balance and coordination and could use the kind of help described above.

Jumping. With threes anything is acceptable as long as the child knows what the word means. Fours should be able to jump with feet together, both from a height and on the floor, but may not jump very high or very far. Fives should easily clear the lines and jump vigorously from the chair. For children who could use practice, build obstacle courses involving a stretch for jumping or a point for jumping off; or make a permanent jumping pit in the playground filled with sand, straw, or leaves. Jumping can be incorporated into group games or gymnastics (as can hopping and skipping, see below).

Running. With the three-year-old we are not concerned with style, but only with whether he does run and can do so without often falling down. Fours should be running with feet closer together and without too much flopping about, kicking back, or toeing in or out. We would expect most fives to run as smoothly as an adult. The teacher should not try to correct the way a child runs, but just give plenty of space and time for running. If children need incentives, introduce simple running games with other children--perhaps just something like "Everyone run to the fence, pick a clover, and run back to me."

Hopping and skipping. In general threes cannot do either, fours can hop fairly well, and fives can learn to skip. Again provide space and simple games. Usually adults should not try to teach these skills; just practice and observation of other children will be enough.

Ball throwing and catching. Threes should be able to throw the ball for about six feet somewhere in the direction of the catcher, and should make some effort to catch the ball (not just holding arms out stiffly in front). Fours can usually throw fairly accurately about six feet or more, and catch with the body most of the time (assuming the teacher is an accurate thrower). Fives should be able to throw accurately at least ten to twelve feet and catch with the hands most of the time. For details on teaching ball skills see *Ball Play* in Chapter 13, Large Motor and Outdoor Activities. Remember that the five-year-old who is quite skillful may be ready for simple versions of *Basketball*, *Bowling*, or *Frisbees* (also in Chapter 13).

Stair climbing. Threes may alternate up. Fours should be able to do so at least when holding the railing, sometimes without a handhold. Fives should be able to alternate both up and down, with a handhold. If fours are not alternating up and fives are not alternating down, show them how it is done and give some practice without pressure. If there is no handrail, be sure that there is a wall for support and a time for practice when the stair is not crowded with other children. (There is a practical reason for teaching alternation before grade school. The child who slows up other children by single-footing down the stairs is likely either to be teased or pushed by the children whom he is delaying.)

Activities for Developing Large Motor Abilities

All of the activities listed under *Large Motor and Outdoor Activities* are good for this purpose. (For a complete list see the *Activity Index.*) The following activities from other areas, such as art and language, are also good for encouraging large motor activity:

Art- 1	Tempera Paint
A- 3	Clay
A- 4	Playdough
A- 7	Blackboard
A- 9	Finger Painting
A-11	Sidewalk Drawing
A-13	Painting with Glass Wax
A-34	Tracing Around Children's Bodies
A-38	Kites
Language-21	Listen and Do
L-22	Jump Up and Do Something
Science-22	Pulleys
Social Science- 1	Daily Classroom Cleaning
SS- 2	Window or Mirror Washing
SS-13	Car Wash
SS-14	Gas Station
SS-16	Airport
Food-22	Cracking Nuts
F-24	Butter
F-32	Ice Cream
Music- 2	Moving to Music
M- 6	Dancing in Wet, Bare Feet

SMALL MOTOR SKILLS

Testing and Recording

Directions for assessing children's small motor abilities are given below. Space is provided on the second page of The Needs and Plans Sheets for recording results of these small motor tasks.

Cutting

Testing. The teacher puts out on the table sheets of paper (8 1/2" x 11") on which a semicircle figure (see pattern included in this chapter) has been drawn or dittoed. Scissors, both right- and left-handed should also be provided. The teacher suggests to the children that they cut out the half circle by cutting down the line and cutting around the circle. This activity may be somewhat more structured than the teacher is comfortable with, but she need not insist that the children use the materials in exactly this way. The reason for providing the dittoed sheets is to set a standard task which makes it easier for the teacher to evaluate the child's cutting ability. Generally children are eager to do this and sometimes want to do two or more.

The teacher should merely observe the cutting. If the child is obviously unable to begin, then she can make the first cut and let the child proceed. If necessary she can hold the paper as he cuts, noting this on the form. To avoid a failure experience for those children completely unable to handle the scissors, the teacher can make one cut and then suggest that the child can tear the paper.

If possible, keep the child's work for his folder. (If he wants to take it home, suggest that he do another.)

Recording.

Cannot cut	Slashes only	Choppy	Fairly smooth near line	Smooth on line
____	____	____	____	____

Right	Left	Alternates
____	____	____

Check off the category on the testing sheet, noting any particular problems, for example, "Shifts between left and right hands, less awkward with left"; "Cuts using both hands on scissors"; or "*Very* frustrated." Children vary a great deal in their approaches to cutting, both in terms of grip and their feelings about the activity. Be sure to note both.

If one or more children cannot be interested in this activity, schedule an especially attractive cutting project, such as paper hats, later in the week.

Buttoning, Unbuttoning, Zipping, Unzipping

Testing. If the climate is such that children are likely to be wearing outside clothing early in the year, the teacher may want to wait and simply observe them as they cope with sweaters and snow jackets. If this is not practical, the teacher can introduce button and zipper frames or a large doll with garments involving small and large buttons and a zipper, and ask the children to dress and undress her. Often children need considerable patience and time to show how well they can do on these tasks. If it is obvious that the child is having real difficulty, the teacher should give assistance, but note this in her scoring.

Recording buttoning-unbuttoning.

Cannot	Awkward	Adept
____	____	____

Recording zipping-unzipping.

Awkward cannot start	Adept cannot start	Adept starts
______	______	______

Drawing

Testing. Here we are interested not in what the child draws, but in how well he can control a writing implement. It is probably easiest to observe this at the time of the individual session when the child is copying forms. (See Chapter 7.) If there is a child who is not interested in crayons or pencils, it sometimes works to save small magic markers and bring them out for the first time at the testing session. These seem to be particularly attractive to most children.

Recording grip.

Hammer	Crude opposition	More or less adult
______	______	______
Right	Left	Alternates
______	______	______

Hammer grip: The child holds the pencil in his fist, like a hammer or a dagger. This is typical of two-year-olds.

Crude opposition: The child's thumb and fingers are on opposite sides of the pencil, but somewhat awkward.

Adult: The child approximates the usual adult grip.

Recording control and position.

Holds at top of pencil	Holds at bottom tip	Intermediate
______	______	______
Very awkward	Fairly good control	Adult control
______	______	______

In looking at "control" we are interested in seeing whether the child makes smooth lines, starting and stopping the pencil line easily, or whether he wobbles about, using very light or very heavy pressure, and generally seems unable to control the pencil.

Follow-up Testing

If a child lacks skill in all of the small motor tasks presented, the teacher may want to look more closely at the way he uses his hands and fingers to try to decide whether his difficulties are primarily due to lack of practice on skills or to generally poor coordination. This situation involves the use of a tube approximately a foot in length (such as wax paper comes on) and several small objects such as a penny, a saccharine tablet, a small bead, etc. The child is presented with the simple game of picking up each object and dropping it down the tube to fall into a box, cup, or dish at the other end. Most children think this is great fun, and the teacher can observe carefully how they pick up and drop each item.

Since the above task will rarely be presented, space has not been provided for recording it. If it is used, place a star in the small motor section on page two of The Needs and Plans Sheets and describe performance on the back of the sheet. Simply observe the child's hands as he picks up the items. Does he fumble for objects, have problems holding and dropping them, seem stiff and awkward; or is he reasonably smooth and controlled?

General Impressions

At the end of the small motor testing, while the performance is still easily remembered, check general level of coordination and interest. In checking coordination, do not just average what the child did on each item; but try to look at overall smoothness and control. There may be children who have had little practice on these particular items, yet generally use their hands well. To assess interest, look at the eagerness with which children approached the tasks and whether they seemed to enjoy them. If certain children seemed reluctant or uninterested, try to involve them in particularly attractive small motor tasks later in the week to see if the lack of interest is a general pattern. (Vary these activities, including art, building, and manipulative projects to try to tap a range of interests.)

General Suggestions for Developing Small Motor Abilities

As with large motor skills, our *major* concern in the small motor area is not with teaching specific abilities, but rather with helping the child to gain control over the use of his hands for whatever purpose he needs to use them. However, since practice with drawing, cutting, buttoning, and zipping increases coordination in general as well as helping the child to learn skills which are needed in school, it is worthwhile to give some specific help. As always, we need to be sure that the child is motivated and mature enough to make use of the help that we are trying to give. If a child resists when the teacher shows him a different way to do something or if the teacher has helped him a number of times and he seems to be making no progress (for example with cutting), it is best to leave it for some weeks with a remark such as, "That's pretty hard, isn't it? We'll try again later." Many young threes, for example, just lack the necessary muscular coordination to cut. On the other hand, if the child is resistant to the teacher's suggestions for changing his approach, but still willing to keep on trying on his own, there should be plenty of opportunity for practicing in his own way, however awkward his efforts may seem to the onlooker. Note that in testing drawing, cutting, etc., we assume that the child has had a chance to practice before. A five with normally good coordination will, of course, have trouble if he has never held scissors before; but he should learn very rapidly if motivated, and not made to feel embarrassed at his lack of skill.

Cutting. For a child of three or above who is not yet able to cut at all or is able to cut only slashes, the teacher should first of all be sure that he has a *good* pair of scissors (left-handed if necessary), and then help in the first stages by holding the paper, and tilting it as needed to make the cutting easier. If a child is using some grip other than the standard thumb and index finger grip and having problems, she may want to show him how to hold the scissors. If using a nonstandard grip and doing well, she should leave him alone. A child may need to spend some time in cutting slashes (or fringing paper) independently before he is able to move on to cutting across the paper, again with the teacher holding the paper if necessary. Such fringing projects as making place mats may attract the uninterested child. Except in the testing situation, cutting on the lines should not even be suggested until the child is quite confident of his ability to handle scissors. Even then most of the cutting activities offered should allow the child to cut what and where he likes.

Drawing. If a three- or four-year-old is still using a "hammer grip" (crayon or pencil clenched in his fist without any opposition of thumb and fingers) or if he is holding the pencil at the very top, the teacher might say, "You can make it draw better if you hold it like this," placing his fingers and thumb in opposition at about the middle of the crayon. A child who uses some form of thumb-finger opposition and has reasonable control, even though not using a typical adult grip, is performing adequately and needs no help in this area. In any case, the child who resists changing should be allowed to continue his preferred grip. He will probably change himself as he matures, and it is more important that he enjoy coloring or drawing than that he should do it in the most efficient way. For the child who seems to have no interest in using a crayon or pencil, try magic markers, or offer a diversity of interesting coloring projects to attract him.

Buttoning, zipping. For the child who is unable to button and unbutton, the teacher should be sure that he has some button-down-the-front clothing or dress-up clothing and plenty of time to try to handle it himself. Big dolls with large buttons on their clothing can also be used. Ordinarily children learn the technique of buttoning by incidental observation of others; but if one seems to be having particular difficulty, the teacher might show him how it is done.

The same is true of zipping and unzipping except for the very difficult task of "starting" the zipper. It is usually not profitable to try to teach this to any child less coordinated than a mature four-year-old because it is really a very difficult task.

General coordination problems. For the child who has considerable difficulty with all small motor tasks, the teacher will want to look at his general small motor coordination with the object and tube task. If the child has difficulty picking up the objects and is awkward in dropping them into the tube, as well as with cutting, drawing, and buttoning, the teacher should be sure to provide him with a variety of small motor tasks which are interesting *to him* and be alert to encourage him in such play.

Although practice in the specific skills tested will increase general coordination, a variety of kinds of other small motor activities should be used simultaneously for all children. There are literally hundreds of things that young children like to do which improve the skill with which they use their hands--from dropping rocks into tin cans to the delicate construction of a tower from Lego. The teacher should be sure that there are always a variety of such activities available so that every child will be able to find something to suit his interests and level of skill.

Activities for Developing
Small Motor Abilities

All of the activities listed under *Table* and *Art Activities* and most under *Food Activities* can be used for practice in small motor skills and control. (For a complete list see the *Activity Index*.) Other useful activities include:

Large Motor-12	Pulling Equipment with Ropes
LM-30	Oiling Tricycles and Wagons
LM-31	Stocking Cap
LM-33	Hammering Nails
LM-35	Blocks
LM-36	Sand Play
LM-37	Water Play
LM-38	Soap Bubbles
LM-40	Making a Mess
Language- 6	Puppets
L- 7	Finger Plays
L- 8	Flannelboard
L-21	Listen and Do
Science- 4	Preparing Leaves
S-16	Cellophane Tubes
S-17	Color Mixing
S-20	Sinking and Floating
S-21	Magnets
SS-23	Working Parts of Machines
Social Science- 1	Daily Classroom Cleaning
SS- 3	Washing Dolls and Clothes
SS- 5	Doll House Play
SS- 6	Moving Day
SS- 9	Packing Suitcases, Filling Purses
SS-15	Small Cars and Sawdust
Music- 4	Musical Instruments

PERCEPTUAL-MOTOR SKILLS

In recent years the child who has perceptual-motor difficulties when he reaches first grade has become a focus of concern because such children often have problems with reading and writing. It would seem that some of these problems could be avoided if children began to receive extra help two or three years earlier.

We had hoped that, by the time this second edition was written, specialists in the field of learning disabilities would have found a clear answer to the question, "What does a child who is diagnosed as having a learning disability at age six look like at age three?" There is currently great concern over this question and research grants have been made to groups trying to answer it. However, as nearly as we have been able to determine, we are not much further along than we were three years ago in practical knowledge on how to detect and work with young children who will have problems later. In another few years we expect to know considerably more.

However, we do have some ideas which we think may be helpful. Certainly we do not want to ignore the child who clearly is behind his age level in perceptual-motor development, just because we are not sure how effective our teaching will be in preventing later school problems. We *are* sure that what we know can be helpful in improving many children's current functioning.

Areas for Diagnosis

When one reads about perceptual-motor problems one discovers that experts are talking about several kinds of abilities, all of which are seen as related to such skills as reading.

Large motor coordination. Balance and ability to position body in space are large motor abilities related to perceptual-motor functioning. Diagnosis in these areas has already been discussed. (See *Large Motor, Diagnosis.*)

Small motor and eye-hand coordination. The ability to use the muscles of the hand and to use visual cues to direct these muscles are also related to perceptual-motor skills. (See *Small Motor, Instructions for Testing.*)

Form discrimination. This ability is assumed to be related to the skills necessary to "match" any two things which are exactly alike, whether they be two-dimensional geometrical forms, pictures of objects, three-dimensional forms, colors, etc. It is tested in the individual or the group testing situation by having children match one geometric form to another. For exact directions see *Individual Testing Situation,* or follow the group instructions for the form-matching game included in this chapter. Since matching forms is a skill which is developed quite early, one would expect a three-year-old to match most of the forms correctly if he is interested in and understands the task. If any child seems to have difficulty, the teacher should try the task with him alone at a later time, giving him plenty of time and encouragement and being sure that he looks at each figure carefully. If he is still unable to match several of them, he should be noted as needing help in this area.

Copying forms. It is assumed that the ability to draw a form nearly like a model is a sample of the child's ability to copy other things. With this task we are asking him not only to distinguish one form from another, but also to use his small motor skills to reproduce it, a much more difficult task than matching. Directions for testing form copying are given in Chapter 7, The Individual Testing Session. Form copying has for many years been a basic item in intelligence tests, but it seems to be particularly effective for picking up perceptual-motor functioning.

In judging copied forms the teacher should not expect perfection. A circle should be roughly round in shape; the ends need not meet but should not gap or overlap much more than one quarter of the distance around the circle. A cross must be made by two lines actually crossing each other and one should be at least half

MATCHING TWO-DIMENSIONAL FORMS

Concept Game for Diagnosis and Teaching

Ability: To match forms.

Concept: Names of forms.

Materials: For playing with five children, make five cardboard strips approximately 3" x 15" like the attached example, with shapes cut from colored paper and glued on. In addition, make two sets of cards 3" x 3" so that the teacher has two of each shape (three of the stars to make a total of 25). If working with young children, make all shapes the same color to avoid confusion. For older children make the children's shapes different colors from the teacher's shapes to make the task more interesting.

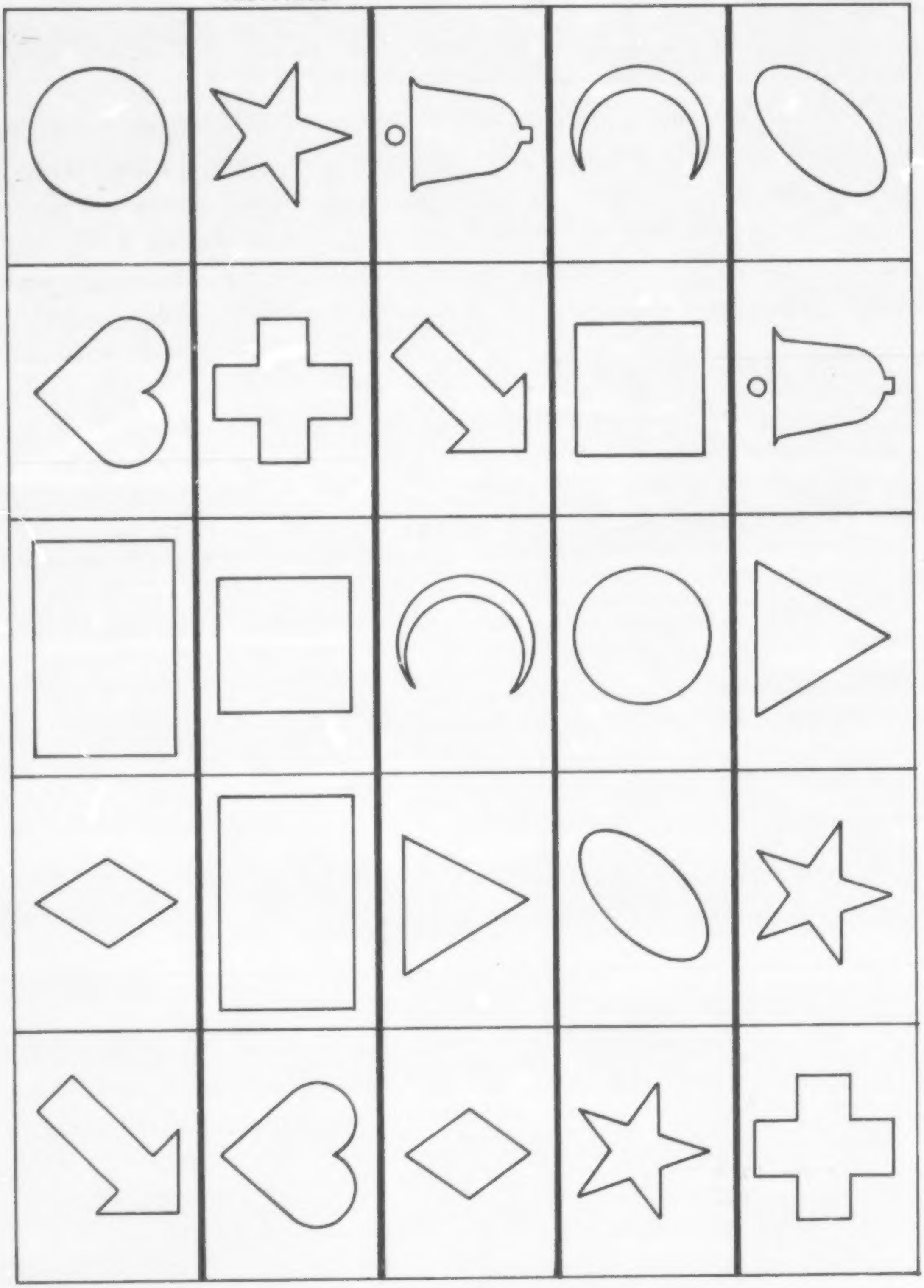
Procedure: 1. Matching: Give each child a strip of shapes. The teacher holds up the first shape from her deck saying, for example, "Does anyone have the shape called a triangle? If you have a triangle point to it on your strip and you may cover it with this card." Always say the name of the shape. Observe the two children who have triangles and as they point to it give each a triangle from your deck to cover theirs. If a child does not recognize his shape repeat the question and help him to discover it.

2. Recognizing: To test the child's ability to recognize shapes, have them help you put away the game and say, "I want to put away the stars first. Does anyone have a star to put away?" There may be confusion here with the young threes and/or immature fours, and this activity may need to wait for another session.

3. Naming: With mature fours and fives the teacher may work on the names for the shapes. She then would hold up a card and say, "Does anyone have this shape? Yes, that's right; you do, Elena. What is the name of this shape?" The child then takes the deck card and covers the shape she has named.

Variations and Use as a Teaching Tool: 1. These same cards can be used by children indivicually or in groups of two or three to play games of their own devising.

Individual



Cards for concept game on matching two-dimensional forms the length of the other. A square must have four sides, but need not have equal angles. A triangle must have three sides only. Size does not matter for any form. A three-year-old who is really trying should be able to draw an acceptable circle; a four-year-old, a cross; a five-year-old, a square; a six-year-old, a triangle; and a seven-year-old, a diamond. These are not exact "norms" but rough guides for the teacher based on the results of many studies of copying. If a child is unable to copy a form at his age level, he can use help with his perceptual-motor development.

There are two further areas for which tasks have not been included, but which the teacher may want to look at in an informal way. When the results of current research are available, we will perhaps be ready to add tests in these areas to our battery.

Position in space. Here we are concerned with whether the child is able to see and remember differences in the direction in which an object or symbol faces. Obviously if "d" and "b" both look the same to a child, he will have difficulty in reading. A lotto game which includes nonsymmetrical geometric forms in each possible position might serve as both a testing and teaching tool. However, the ability to make these discriminations develops relatively late and many four-year-olds and some fives normally make many mistakes in such games. The nursery school teacher should not be concerned if the child has problems in this area, while the kindergarten teacher will probably have access to pre-reading materials intended specifically to help children with this ability.

Figure-ground perception. This ability involves picking one item out of a mass of detail and focusing on it. Again we have not included any formal testing, but the teacher may pick up informal clues from the child's ability to see detail in picture books or photographs. Kindergarten teachers may be given specific diagnostic tools for this purpose.

Relating Various Perceptual-Motor Abilities in Diagnosis

Although we have talked about a wide range of skills here, many of them are obviously related and depend on each other. Therefore, the teacher needs to look further than the child's performance on just one task before deciding what special help the child needs. For example, a four-year-old who cannot draw a cross may have any one of a number of problems. His general overall coordination, use of his hands, and ability to perceive forms must all be looked at individually. He may have problems with one or more of these abilities, and the teacher must then concentrate on giving help in the appropriate area or areas. However, if he seems to be performing adequately on all, then the process of putting them all together is where the teacher needs to put the emphasis.

Seeking outside help. One obvious question is when to ask for outside diagnostic help. This will partly depend on resources. If the class is in a public school and there is a specialist in learning disabilities in the school system, the teacher would ask for help earlier than if a referral had to be made to a private clinic in another town. However, caution should be used in making any referral. Because of the great concern over learning disabilities, some people tend to label children as such too early and in such a way as to frighten parents unnecessarily. It should also be emphasized that parents should be warned to check carefully the credentials of specialists in this area. The current combination of concern and lack of exact information has encouraged unqualified people to present themselves as specialists. Parents will certainly want to talk with their family physician about the problem.

There are three possible causes for being behind in perceptual-motor development:

1. Slow general development. Many children, especially boys, just seem to be late in developing these skills as a part of their normal pattern of development.

2. Lack of practice. Some children come from homes where they have had relatively few chances to use their perceptual-motor abilities.
3. Neurological problems. A few children have neurological reasons for their problems as a result of an inherited defect, or injury or infection before, during, or after birth.

Unless the child has a *severe* problem of coordination or a history of a difficult birth or serious illness, it is most efficient to assume that the problem is not neurological until after giving the child extra practice in a range of appropriate activities for a period of two or three months. (For this reason, testing before the middle of the fall is important.) If, after such special help, he does not seem to be making progress, the teacher should look for outside assistance. Such a process is not as unfair to the child who does have a neurological problem as it sounds, since the special help the teacher would give consists of the same kind of activities which would probably be suggested by a specialist, whatever the source of the problem. The wait to see what happens will save parents unnecessary worry and expense if the special help in the classroom is effective. In many cases, the teacher will want to discuss with parents the kind of activities she is providing and enlist their help at home; but she should be careful to avoid making the parent (and hence the child) anxious about the situation.

General Suggestions for Teaching Perceptual-Motor Skills

It is difficult to find an activity which does not in some possible way relate to the child's perceptual-motor development, if we define it in the broadest possible way--as the ability to observe, draw meaningful conclusions about, and do something with an object or objects in the environment.

One basic aspect of perceptual development which is more an attitude than a skill is simply the child's general awareness of and openness toward the world around him. Throughout this manual we have emphasized over and over the importance of teaching the child to explore his world in every possible way--through vision, hearing, touch, smell, and taste. Suggestions for encouraging this awareness can be found following the games in Chapter 8 on such concepts as color, line quality, three-dimensional form, texture, etc.; and the teacher should consider such encouragement to be the *first step* in helping the child in the perceptual-motor field. A child who is not aware of his environment cannot learn from it.

Large Motor and Eye-Hand Coordination

As we have pointed out, suggestions for these have already been discussed under *Large Motor, Developing Skills* and under *Small Motor, General Suggestions for Teaching.*

Form Discrimination

Because the ability to discriminate between different shapes is basic to the process of learning to read, considerable emphasis has been placed on practicing form discrimination before first grade. However, far too much of this time has been spent in trying to teach children to discriminate and label the basic geometric shapes such as circle, triangle, and square. It has been our experience that three-year-olds have almost no interest in such labeling and that fours and fives, while they can learn the names fairly easily, readily become bored with the repetition of simple forms. (Finding out whether children know the names of shapes can be done through the form matching game included in this chapter.)

Actually teaching the *names* of shapes is not nearly as important as giving children a wide variety of experience in the discrimination of two-dimensional form for both reading readiness and greater appreciation of the world around them. Fortunately most children enjoy very much the process of finding "things which look alike" or "the one that looks different," or describing the shapes of things that they see.

A limited amount of labeling of geometric shapes and the introduction of children to more interesting and complex forms can be done through comments by the teacher in the daily nursery school routine or through special activities devised for the purpose. The teacher can encourage children to look for things which are certain shapes; for example, shoe eyelets are round, and windows are rectangular. In art activities the child may learn to appreciate his own production in terms of its forms if the teacher simply traces a shape with her finger without trying to give it a label, and says, "That's an interesting shape you've made," when the child comes to show her his painting.

Along with awareness of form goes the ability to compare two or more objects, forms, or pictures and to decide whether they are alike or, if different, how they differ. In addition to the specific activities listed below the teacher may emphasize or ask questions about things in the environment which provide interesting matching experiences. "Jimmy, you have shoes just like another boy's today. Can you find him?" or "Ralph, there's a picture on the bulletin board that is the same as the cover of your book." She can also help children to describe more subtle differences in their own words, for example, by picking up an elm leaf and an oak leaf and asking about the difference in their shapes. The child who says, "The edges of this one are wrinkly, and this one has sharp points" is really learning to consider differences in his own real world.

For the child who has particular perceptual problems involving difficulty in matching, the teacher can make up many variants of the games presented below so he can have a great deal of practice at his appropriate level without getting bored with repetition. For example, the teacher can prepare several sets of three-dimensional matching games or provide new patterns for the pattern matching game.

Many games or materials such as formboards and lotto, made especially for form discrimination, are available from commercial sources. However, they are also very easy to produce. (This is a good job for volunteers.) It is particularly valuable if you can have several sets of the same type of game with forms of increasing complexity or difficulty to match, so that children can progress.

Discrimination of letters and numbers can be started by the process of putting names on paintings, placing labels on objects, and using "experience charts." When the child has progressed to the point of wanting to learn the names of letters and numbers, cardboard and sandpaper letters can be used as well as lotto and bingo games made with letters and numbers. (See *Reading*.)

Copying Forms

The child who cannot copy forms appropriate to his level can gain from tracing over dittoed forms and tracing around form templates (both the type one traces around and the type which is cut out and one traces inside it). This task can be made attractive by suggesting ways in which the process can be varied (magic markers, different colors of crayons, using a paintbrush, etc.) and ways in which the product can be used (put on the bulletin board, taken home, cut up for collages or place mats). The teacher can make cutouts of pictures of things rather than geometric forms, or cooky cutters may be traced around as long as the outlines are fairly easy to follow.

However, if a child resists even attractive tracing tasks, he should not be forced to do them; nor should the activities for the child who enjoys them be limited to such tasks. A large number of suggestions for other kinds of related activities are included in the *Copying Game*; and while they do not all use the exact skills used in copying forms, all should be of help. Many copying games are especially attractive to children if played at the blackboard.

Position in Space

As noted in the diagnostic discussion, many nursery school children are not really ready to distinguish position of figures; but games which help children to distinguish where various parts of the body are in space can give a start. (See *The Copying Game* or *Gymnastics*.) For older children, a homemade position lotto game can be helpful. If children are already recognizing letters, the teacher may want to play position lotto with numbers, then capital letters, then lower case, presented each time in a variety of orientations.

Figure-Ground Discrimination

This is best approached with the young child by helping him learn to focus on detail, and by giving practice in looking for a particular object or kind of object among a group of other things. Pictures in books or pictures with many small details, particularly those which have something special to look for, like the lost bunny hiding from his mother, are good for this purpose. If a child seems to have particular trouble with perception of details, a chance to sit alone with an adult and play a game of looking for things in pictures may be very good for him. A number of books which are especially good for this purpose are listed below. Simple jigsaw-type puzzles where the cutting lines cut across the details of the picture are also helpful.

If the teacher thinks the children are ready for it, she can also play a game in which she has drawn simple outlines of animals, or geometric forms if children know the names, and then has drawn lines either straight or wiggly across the figure. These can be held up and children asked to tell what is hiding under the lines.

Activities for Teaching Matching Skills

Table- 2	Name and Word Puzzles
T- 6	Nuts and Bolts
T- 7	Fitting Lids on Containers
T-15	Fabric Sample Box
T-17	Matching Pictures to Objects
T-18	Matching Outlines and 3-D Shapes
T-29	Dominoes
T-34	Lotto
Language-20	Word Matching
Trash to Treasures-35	Matching Paint Sample Chips
TTT-43	Shape Box
TTT-58	Bottle Top Board
Science- 4	Preparing Leaves

Activities for Teaching Copying Skills

T-16	Tape Patterns
T-26	Copying Game (Note that the Copying Game contains a variety of activities.)
L-18	Whisper Tube Talking
Art-33	Toy Money

Books for Figure-Ground Discrimination

Ayer, Jacqueline; *A Wish for Little Sister, NuDang and His Kite*
Bonsall, Crosby; *The Case of the Hungry Stranger*
Brown, Margaret Wise; *The Runaway Bunny*
Burton, Virginia Lee; *Katy and the Big Snow, The Little House*
Carroll, Ruth; *Where's the Bunny?*
Charlip, Remy; *Where Is Everybody?*
Huntington Harriet; *Let's Go Outdoors, Let's Go to the Brook, Let's Go to the Seashore*
Itse, Elizabeth; *Hey Bunny!*
Knight, Hilary; *Where's Wallace?*
Leaf, Munro; *Wee Gillis*
Lionni, Leo; *Inch by Inch*
MacDonald, Golden; *Red Light, Green Light*
Meyer, Renate; *Hide and Seek*
Payne, Emmy; *Katy No Pocket*
Piers, Helen; *Snail and Caterpillar*
Raskin, Ellen; *Nothing Ever Happens on My Block*
Schick, Eleanor; *Making Friends*
Suess, Dr.; *And To Think That I Saw It on Mulberry Street*
Walpole, Ellen Wales; *The Golden Dictionary*

(Note that any book which either has very small, interesting detail or somewhat unclear pictures can be used for this purpose. The important thing is to be sure that the children's interest is aroused.)

Chapter 5
Diagnosis and Teaching in the Language Area

In this chapter we describe how teachers can assess needs and strengths in understanding and using language, and we give suggestions for teaching. There are also discussions of the bilingual child, dialect, and early reading.

Using the Language Checklist

The long form of the Language Checklist shown below is also included in the Appendix for ease in removing from the book and photocopying. The teacher may want to fill out a copy of the checklist for each child; or she may use one copy of the long form Language Checklist to refer to while filling out the short form of the checklist included on page three of the Needs and Plans Sheets. (See *Needs and Plans Sheets, sample*.)

The first steps in filling out the Language Checklist are quite simple, involving only listening to each child's speech and observing his reactions when other people talk to him. However, it is important not to do this from memory but rather to take time to really look at and listen to each child. One way to do this would be to choose four or five children to pay particular attention to in the course of each morning until all children have been observed. This can easily be done as the teacher goes about her regular routine, if she has a pad of paper in her pocket for making occasional notes. She should make a point of listening to each child's use of language--not only the way and amount that he talks--but also the way in which he responds to others who are talking to him.

Unless the classroom has a high proportion of children whose first language is not English, it will probably be found that most children can be checked as adequate in most areas of speech with

LANGUAGE CHECKLIST

	Definitely needs help	Could use help	Adequate
Understanding[1]	Very often does not understand what is said to him.	May have trouble understanding if not spoken to carefully and directly or in simplified language.	Rarely fails to understand.
Amount of language use[1]	Speaks little or not at all.	Answers direct questions or makes requests only.	Initiates conversation and uses speech socially.
Use of sentences[1]	Uses only one or two words at a time (or no language).	Three-year-olds: Use mostly phrases. Four- and five-year-olds: Use only simple sentences.	Three-year-olds: Frequently use complete sentences. Four- and five-year-olds: Frequently use more complicated sentences.
Intelligibility[1]	Frequently difficult to understand.	Occasionally difficult to understand.	Speech usually clear and audible.

[1] If child's first language is not English, note skills in both languages.

only minor notes to be made on their records at the end of each morning of observation. Notes might include such comments as, "Difficult to understand when he is excited (speaks very fast)," "Can use speech socially, but usually very quiet," or "Often uses baby talk, but can speak clearly."

After this preliminary screening, the teacher should then take another morning or two, or as much time as is necessary, to observe more closely those children who seem to have special needs in one or more areas of language. She will probably want to get other staff members to make observations also so that notes can be compared. Specific ways of looking more closely at language needs are described below under each section of the checklist. In some cases, it may be desirable to try to get the help of a speech therapist to decide how serious a problem is, as well as how it should be handled.

Understanding

Definitely needs help	Could use help	Adequate
Very often does not understand what is said to him.	May have trouble understanding if not spoken to carefully and directly or in simplified language.	Rarely fails to understand.

There are a number of possible reasons why a child might appear not to understand what is being said to him. The first reason might be lack of experience with language. Since children normally learn to understand what is said to them long before they learn to say the same things themselves, most three-year-olds have had more than enough practice in listening to others and understanding them. Exceptions would be children from homes where English is not spoken or severely deprived children from homes or institutions where no one has talked to them. If certain children who seem to have problems understanding are known to come from such backgrounds, the assumption could first be made that their difficulties come from lack of experience with the language. However, if after a period of special language help, such a child seemed to be making little progress in understanding, the possibility of a second cause, hearing loss, should be checked. (For a more detailed discussion of the needs of the bilingual child, see *Bilingual Children.*)

If the child frequently does not respond to the speech of the teacher or other children, the teacher may do some simple screening to see if his hearing is normal. She can speak his name softly from behind him or observe his reactions to noises made out of his sight such as the ringing of a bell or some other soft but unusual noise in the room. If the child does not respond to noises, he should certainly be taken by his parents for a hearing checkup or referred to the school nurse if testing facilities are available within the school system. Both parents and teachers need to be alert to the possibility of hearing loss caused by a chronic middle ear infection. In such cases the child can hear at some times, but not at others. In the long run, this condition can lead to permanent damage.

If there seems to be no problem of hearing loss, one would next consider a third possible reason for lack of understanding--the child may not be paying attention; or if he is hearing, he may not want to respond. The teacher should speak directly to him being sure that she has his attention, and ask him to do something which he enjoys doing. If he has no problems understanding under these circumstances (the teacher should try this several times over a period of days), it may be concluded that he has no real understanding problem. He may not be listening because he becomes so involved in play that the outside world is not important or because he has become used to "tuning out" noise and confusion and tunes out people talking to him as well. Another possibility is that the child hears and understands, but responds only when he feels like it, as a way of protecting himself against what he feels to be unreasonable demands. Careful observation of the situations in which the child responds and those in which he fails to respond should make it possible to decide whether he is "tuning out" or just not responding. In either case, the child needs help in the social-emotional area rather than in language.

Finally, a child may fail to understand due to a more basic and deep seated cause. Inability to understand or to use language adequately because of organic problems is both rare and difficult to diagnose in preschool children. However, if a child has had ample opportunity to learn language, has had his hearing checked, and seems to be trying to understand what is said to him but has difficulty doing so, the parents should be encouraged to check with a speech and hearing clinic or with their own physician.

Amount of Language Use

Definitely needs help	Could use help	Adequate
Speaks little or not at all.	Answers direct questions or makes requests only.	Initiates conversations and uses speech socially.

By observing a child in a social situation such as doll corner, block building with other children, or playing in the sandpile, those children who use speech freely for social interaction can be quickly checked off. Social speech is talking to others for the fun of it, not to ask for something or answer questions. For example, a spontaneous comment to another child, "My doll has red hair" is social speech, as defined here; "Give me the bottle" is not. At the same time it is easy to check whether the children use phrases or sentences. For children who avoid such social play, it may be necessary to listen over a period of several days to see how much they use speech for other than immediate needs.

If a child is either not talking or is not using social speech at school, the next diagnostic question is whether he is normally talkative at home or whether he talks little, if at all, anywhere. A home visit or an interview with the mother should clarify this in most cases. If the child talks readily with family and friends, the problem of the teacher is to find ways to make him comfortable enough in the school situation so that he can use language there also. The child who talks readily in his first language, but not in English, is a special diagnostic concern, discussed under *Bilingual Children*.

The child who uses speech both at home and at school only to meet his immediate needs and not for social interaction may have a problem primarily in the social rather than the language area, or the two may be interrelated. The teacher will want to focus on helping the child with both before she decides whether further diagnostic help is necessary.

If a child of three or above has little or no speech in any situation, the teacher will probably want to explore with the parents referral to the family physician or a clinic. In many cases the parents may already have talked to someone about the problem. However, if the child comes from a severely deprived home, the teacher may want to see how he responds to a period of help in the nursery school before asking for further diagnostic help.

Use of Sentences

Definitely needs help	Could use help	Adequate
Uses one or two words at a time (or no language).	Three-year-olds: Uses mostly phrases. Four- and five-year-olds: Uses only simple sentences.	Three-year-olds: Frequently uses complete sentences. Four- and five-year-olds: Frequently uses more complicated sentences.

Amount and type of language use often go together. The child who does not use speech socially, frequently speaks only in phrases. However, the teacher should never assume that this is the case. The needs of a solitary child who does not talk to others but uses complicated sentences while talking to himself are very different from those of a leader among kindergarten boys who makes himself clearly understood with brief commands, exclamations, and gestures only.

Again one can check off this item easily by just listening to children talk. It should be noted, however, that when we speak of complete sentences, we are not concerned with details of the grammar, but rather with whether at least some of the child's comments have both a subject and a verb, for example, "I want to slide," not just "Slide" or "Me, now." Some examples of more complicated sentences which might be expected of fours and fives are "When I fell down, I hurt my knee," "If you don't quit that, I'll tell the teacher," or "I want the doll that was in the buggy."

Intelligibility

Definitely needs help	Could use help	Adequate
Frequently difficult to understand.	Occasionally difficult to understand.	Speech usually clear and audible.

The central diagnostic question in this area is a simple one: Do other children or the child's parents frequently have trouble understanding him? If so, the teacher should talk with the parents about the possibility of referral to a speech clinic or having a speech therapist visit the classroom to assess the child. Special help is called for in this situation because the child who cannot make himself understood is almost sure to have problems in his social interactions, and is likely to feel inadequate and frustrated. Evaluation by a speech therapist is usually not called for in the case of a child who has some problem of enunciation or pronunciation, but is still intelligible, because most of these kinds of problems resolve themselves without special help by the time the child is in first or second grade. (The teacher of a kindergartener who still has marked problems might want to ask a speech therapist to check him during the year.) The teacher should, however, be on the alert for signs of physical causes for speech deficiencies--nasality, extreme difficulty in forming sounds, or obvious deformation of the mouth or palate--and might suggest a medical checkup.

Special Language Problems

Before going on to discuss general methods of helping children with language, there are three controversial topics in the language field that warrant simultaneous discussion of diagnosis and teaching. These are education of bilingual children, dialectical speech, and early reading. In each case, the teacher will be exposed as a professional to different points of view and to pressures from parents and others to teach in different ways. We have stated our conclusions in each area, but have also tried to give some idea of the range of other opinions so that teachers can make their own decisions.

The Education of Bilingual Children

Until very recently the usual practice in schools, whether at the grade school level or earlier, was to try to move all children toward fluency in English as rapidly as possible. Even today in some schools Spanish-speaking teachers are not allowed to speak to children in their own language, and children may even be punished for speaking Spanish. The idea behind this point of view is that children will not be motivated to learn English if allowed the "easy way" of speaking their first language in school. However, recent experience seems to indicate that children often do better academically if they are introduced to reading and writing first in their native language while learning to speak English as a second language. Such classes have been started in some areas with large Spanish-speaking populations.

Thus it seems that the ideal kind of preschool and kindergarten for a child whose family speaks a language other than English is a truly bilingual one in which the teacher speaks both languages and in which children learn each other's languages by playing together. In this situation language learning can move slowly and naturally without pressures to speak one language or the other. The encouragement currently given to teachers to become fluent in a second language indicates that the value of bilingual programs is now recognized.

Unfortunately most teachers who need to help bilingual children either do not speak the second language themselves or have classes in which most of the children speak only English. This means that the emphasis must be on helping the child to learn English, without putting him under pressure or giving him the impression that speaking English is better than speaking his own language. To achieve this requires both careful planning and sensitive teaching.

The first step in working with a bilingual child, whether he is a member of a group or alone, is to make him feel safe and comfortable in the classroom. We must keep in mind that school is often more difficult for such children, not just because of language differences, but because some such children come from cultural backgrounds where they have been somewhat sheltered and have had fewer experiences with strange places and people. (We have found this to be true of some girls from Spanish-American homes.) Other such children may have just moved from another country and are still upset from the major changes that this has brought in their lives. Therefore, when a teacher knows that a child who does not speak English will be in her class, she will want to take particular care to ease the introduction to school. The child should always visit the school ahead of time; and if at all possible, the mother should arrange to stay for as long as the child needs her. If the mother does not speak English either, arrangements should be made to have a translator available a part of each morning to explain to the mother and child what is going on in the class and to relay their questions to the teacher. Usually this translator can be a community volunteer or friend of the family.

During the time in which the child and mother are together in school, the teacher should try to make an assessment of the child's understanding and command of English, and plan for communicating with him once the mother has left. It is critical for the teacher and child to be able to communicate basic ideas to each other. First the teacher should try to establish how much English the child knows by watching to see if he understands her simple phrases, or by asking the mother what his experience with English has been. If understanding is limited, then the teacher should seek the help of the mother or translator in putting together a brief set of phrases in the child's language that the teacher can learn. This would include such essentials as "Do you need to go to the bathroom?" "Time for lunch (to go outdoors, nap, to sit down)," "I'm sorry, I don't understand. Can you show me?" She will also need to know what phrases the child will use for his needs. If possible, an arrangement should be made for the child to speak to the mother or translator on the phone if a crisis arises.

If the classroom is in a part of the country where there are always or frequently children speaking a certain language, the teacher should definitely find the time to take at least an introductory course. However, if she is a teacher in a university town, she may find herself with a Hebrew-speaking child one year and Italian- and Norwegian-speaking children the next. Then, a brief set of phrases is probably all she can manage.

Later the teacher will need to ask the mother or translator to give her additional phrases to fit the individual case. (At one school we needed desperately to find out how to say, "We don't run in the school" and "We don't hit the other children" in Turkish. However, one might equally need to be able to say, "Jennie wants you to play with her.") The teacher may also want to ask that something be explained in more detail to the child--such as what Halloween is all about.

Once the initial adjustment has been made, the teacher can begin the real job of assessing where the child is in English in order to plan a program for him. She will already know whether a child has no English at all or has some understanding. The next step is to decide roughly how much spoken English the child understands and whether he speaks English at all. Informal games such as lotto, Listen and Do, or asking a small group of children to point to objects in pictures can often involve the child without threatening him. When he seems comfortable in such games, one can begin asking, "Can you tell me the name in English?" supplying the word if he does not know. Sometimes the results of such games are surprising to teacher and mother alike. In many homes with older brothers and sisters going to school or in which English is spoken. in the after-school play groups, the young child has picked up a good knowledge of English without anyone being aware of it. For such children, helping with language requires the same techniques as the teacher would use with any child who did not use speech very much.

In fact, even for children who speak little English, the procedures for teaching are not very different from those generally used for helping all children who need help with language. (See *Language Skills, General Suggestions*.) First of all, the teacher listens to the child, to give him the feeling that what he says is important. Opportunities for practicing speech are provided by encouraging him to join other friendly, noncritical children, especially in situations such as doll play where there is likely to be interaction and conversation. At the same time, the teacher talks with the child, at first using the same simple phrases for basic situations and labeling objects with single words, going on to more complex speech when he is ready. Finally, the teacher provides a wide range of experiences to permit the child to learn about many kinds of things. Thus one might begin in "A, B, C" books intended for younger children for labeling, or just sit looking through a magazine with the child, letting him tell the words he knows and giving him words that he does not yet know. Other children can also do this with him. A trip out to the kitchen, down the hall, or to the park can all lead to new language experiences.

In some instances children resist labeling and the whole process of learning English. In these cases the teacher should avoid putting on any pressure, but rather concentrate on making the child happy in the classroom, while looking for other ways of helping with language. However, most children seek and enjoy these labeling sessions, so long as the teacher has first seen that the child is comfortable with school and with her, and does not push language learning when the child is tired or uninterested.

There is, however, one major difference between ordinary language teaching and teaching English to a child who already speaks another language. At least some two-way learning is essential if we are to convince the child that his first language (and hence he himself) has value. The teacher has already made a start on this with her stock of useful phrases, but she should not stop there. As the child is learning English, he can be teaching the teacher, and any of the children who are interested, words in his language. For example, lotto can be played by having the bilingual child serve as leader and say the name of the object in his own language as he holds it up. The child who gets the card is encouraged to say the word as he takes the card.

The language can also be introduced into the classroom in many other ways. If the teacher is at the stage of putting printed labels on objects in the room, labels can be in both languages. The children can all learn a few songs in the foreign language and listen to others. If at all possible, some children's books should be available which can be read to the bilingual child in his own language with others of his friends listening. (The practicality of some of these ideas depends of course on having a teacher with some knowledge of the language or a volunteer who speaks it and comes in on a fairly regular basis.) Fortunately quite a number of books and records are being made available in Spanish and French today. Materials in less common languages would need to be provided by the parents or volunteer translators. Finally, the culture as well as the language of the child can be studied in the classroom through stories and experiences with foreign foods, holidays, and customs.

Teachers often do not stop to discuss with parents their feelings about their child's language. When they do so, they will often find surprising differences in attitudes--differences which will affect the learning situation in school. Some parents, often recent immigrants, want to switch the child immediately to English and prefer that he should not hear his own language at school. Others want to hold fast to their heritage and resent the lack of schools where the child can be taught in his own language. For either, the teacher needs to understand their feelings, but must stress that the child will be happier if he can value and practice both his old and his new language. In any case, the parents need to be kept informed of and involved in the child's progress.

Dialectical Speech

The issue of the schools and nonstandard English has become a bitter one in recent years. One finds points of view so diverse that they can structure almost the total curriculum of the preschool. One group holds that the form of English spoken at home should be the language of the preschool, kindergarten, and first grade with reading and writing originally taught in dialect, and with standard English introduced as a foreign language later. The polar point of view holds that it is the first responsibility of the preschool to teach standard English because dialectical English does not provide the structure for adequate cognitive development.

As usual, our own bias is somewhere in the middle. Backed by the group of linguists who hold that for thinking purposes one language is as good as another, we disagree strongly with the "drill in standard English" approach. We feel that this is saying to the child, "Your language isn't as good as mine." Further, such emphasis on teaching grammar is using too much of the time which the child needs for other kinds of learning. On the other hand, we would prefer not to see young children in this country divided into groups on any basis such as sex, religion, race, or language, since the best years for getting to know and like each other are the earliest years. In this respect we would hope that the children mentioned in the previous section who were learning to read and write in Spanish would be spending the rest of their school time in mixed language groups.

Rather, we would like to see classrooms in which some children would speak dialect and some standard English and the teachers might speak either. Such a class would not present the problems of a half Spanish- and half English-speaking class because it would require relatively little effort for everyone to understand each other. Because most TV English is standard English, the dialect speakers would be ahead of the others; but in a very brief time two-way communication could be achieved if the climate was right. The result would be a little like meetings between speakers of Norwegian and Swedish; each speaks his own language yet understands the other. Children rarely have problems with this, but teachers who really feel that they should be teaching "correct" English may have to work at understanding and accepting. The question may be raised whether the children speaking dialect will find it harder to learn standard English when they are older. The answer would seem to be that they *are* learning it and will be able to use it later if they choose to do so, just from the informal experience of hearing it from day to day.

Early Reading

Differences of opinion about when reading instruction should begin are not new. Until recent times, the beginning of school usually meant the beginning of reading, but the age of starting school might be anywhere from three to seven or eight. Montessori schools have always stressed early reading. On the other hand the "traditional" nursery school has usually avoided "academics." Suddenly, however, the question has been a much more emotional one. We see a mother frantically labeling everything in the house, convinced that her 18-month-old will never learn to read unless she starts *now*. At the other extreme we heard of a teacher who was fired from a nursery school job because she printed the "A, B, C's" for a child who asked her to do so.

If one follows a diagnostic point of view, however, the whole question of setting an age when children should start becomes meaningless.

First of all, we recognize that learning to read is not a simple skill. The abilities which go into it are very complicated and require much practice. The newborn baby who begins long hours of effort necessary to gain control of his eye muscles is "learning to read." So is the two-year-old who learns how to tell when the book is right-side-up. And so, for that matter, is the adult who learns in a college study-skills class to skim instead of reading word for word. Thus any teacher needs to be responsible for helping the child to take those steps toward reading which he is ready for *right now*.

Second, the teacher should try always to be alert not just to what the child is ready for, but what he *wants* to do. The worst thing about the overconcern about reading today is that teachers and parents may try to push children into reading activities when they are not interested in them, thus starting a whole cycle of "I don't like reading. I can't read. I must be no good because my mother wants me to read." On the other hand, though more rarely, a child who is aching to learn to read right now may be told, "That's too hard for you now. Wait until next year, and then you can do it."

Third, even if we talk about learning to read in a more limited way, just in terms of learning to associate certain combinations of letters with the spoken word which they represent, we find that there is no one best way to start. Different children will tend to use different ways of approaching reading and teachers should try to follow their lead. Some will use a whole-word approach and begin asking the meaning of words which they see about them, typically words on road signs, cereal boxes, or labels in the classroom. Others may become intrigued by the sound of letters, eagerly learning the alphabet and beginning to ask about the differences between names and sounds of letters. Still others begin with an interest in printing rather than reading, and learn to read words through first printing them, then remembering them. The teacher who wants her children to learn to read at their own rate will try to provide experiences to fit each of these approaches, increasing the difficulty of the experiences as the children seem ready for more.

Below are listed more specifically the things children need to know before they can read and some of the ways in which these things can be taught.

Spoken language. Obviously, except in the case of deaf children, an understanding of and ability to use vocabulary precedes being able to read it. Many ways of providing speech experiences are described under *Language, General Suggestions for Teaching* and under *Language Activities*.

Understanding of what books are for and how to use them. By having picture books at home and in the classroom, and by learning to enjoy looking at them and being read to, the child gains a positive attitude toward the process of reading. In addition he practices the basic motor and perceptual skills involved in holding a book right-side-up, turning the pages from front to back one at a time, and learning to discriminate objects in pictures--simple, but very important. (See *Books in the Nursery School and Kindergarten*.)

Form perception. This ability involves discriminating one form from another, naming, and remembering them. Here the child goes through the stages of matching simple forms, then more complex forms, and finally learns to give a label to a form and remember the label. (See *Form Perception, Individual Assessment* and *Suggestions for Teaching.*)

Auditory discrimination. Every preschooler needs to learn to listen to sounds and to discriminate between subtle differences. (See *Auditory Discrimination, Diagnosis and General Suggestions for Teaching.*)

These four pre-reading areas should be a part of every preschool curriculum because all threes and fours are ready for such experiences, although they will vary in the level of experience which they need. For example, one four-year-old may need to start with simple stories, easy puzzles, and just learning to stop and listen. Another four-year-old in the same class will be ready and eager to relate all four areas to actual reading experiences, while still another may be eager to play games involving matching of sounds, but not be ready to learn the names of letters.

Thus, the teacher who is interested in helping children who are ready to learn to read, will want to look carefully at these four basic areas and to set plans for each child based on where he is currently functioning and on the interest which he shows. A few reading activities have been included in the language activities section, but it is suggested that a teacher who feels that some of her children are really ready for more advanced work should seek the advice of the public school teachers (kindergarten or first grade, depending on the present level of the children) who will probably be teaching the children next year. In this way, she may avoid confusing the children with different methods. The teacher may also refer to books on teaching reading which stress an informal "experience oriented" approach. A good one is listed in the Bibliography.

Whatever her own approach to pre-reading or to the teaching of reading, the teacher should feel it her responsibility to help parents who are concerned about early reading to become more relaxed about the whole question, thus making it easier for the child to proceed at his own pace, whatever that is. Showing parents the many ways in which they can help children develop in the four basic areas listed above, and suggesting that they follow the leads given by the child, can make beginning reading an exciting rather than an anxious process.

General Suggestions for Developing Language Skills

Basically, as noted earlier, we feel that the teacher's primary focus in the language area should be in encouraging production. We have already indicated the kinds of cases in which we feel she should seek professional help. For the rest of the children, however, the teacher's language program uses three general approaches.

First, the teacher listens to the child. Too many children have had the experience that conversation with an adult is a one-sided situation, in which what they say is ignored or not taken seriously. Many adults direct a series of questions at children and, of course, get one- or two-word answers or none at all. By really stopping and paying attention to what a child is trying to say, it is possible to help him see that talking is a worthwhile activity. Then the teacher can go ahead to provide every child with other opportunities and incentives for talking. This involves both somewhat formal situations such as games and informal situations such as free play, when the encouragement of social interaction makes it probable that children will be talking with each other.

The teacher's second approach is to provide experiences which give the child something to talk about and the vocabulary to talk with. Such experiences include field trips, science projects, reading of stories; the list is endless. In this manual, the concept games and activity sections help with this aspect of language development. However, as with language modeling done by the teacher, source experiences must be tailored to the level of the group. Experiences must be meaningful to children before they can begin to talk about them; and they must understand words through having heard them in many different contexts before they can be expected to use the words themselves.

A third approach to increasing language production is talking to children. The teacher knows that just talking can serve many educational purposes. If the child values the teacher's attention, he will also come to value being talked to and listening, which may not have been the case before. The teacher also provides a model, so that from her children learn new words, more complicated ways of saying things, and how to use language effectively. Through talking, the teacher presents many new ideas or helps the child think in a different way about objects in his environment.

However, how and when the teacher talks require careful thought. "Verbal bombardment" (talking all the time) can backfire in that the child may quickly learn to "tune out" talk which means nothing to him and in which he has no interest. In fact, if he lives in crowded conditions with a TV set which is never turned off, the problem may be to teach him to "tune in." Thus, for language teaching purposes the teacher would *ideally:*

1. Be sure that she had the child's attention.
2. Say something he was interested in hearing.
3. Use words which he knew but in a form just slightly more complicated than the child would ordinarily use himself, or with an occasional new word used in such a way that its meaning is clear.

Obviously the teacher cannot think through everything she says this carefully, but she can get into the habit of talking only when children are listening and of trying to make conversation really interesting to children. Further, she can try to keep her speech forms and vocabulary level fitted to the needs of the group she is working with and can try to avoid a stilted or "talking down" approach. Most nursery school teachers do try to get the child's attention by using his name, moving up close to him, or sitting down to talk at his level and do try to speak simply and distinctly.

It should be noted that the modeled speech discussed above need not necessarily be that of the teacher. It appears that the best situation for learning language may possibly be one in which a child freely interacts with children whose language is slightly more advanced. The teacher should try in every way possible to foster such social-language play. Particularly valuable are role playing or other types of cooperative play which are most likely to produce spontaneous language. *But most essential is that when a child does talk, there should be time and a person to listen.*

Activities for Teaching Language and Increasing Language Use

In practice almost any activity can be used by a teacher to increase language use by children or to add to their vocabulary. The teacher may talk about what a child is doing, adding a new word or two in an appropriate context. She may start a conversation between two or more children by initiating a discussion and slowly moving out of it. A child's running commentary on what he is doing may be encouraged by an occasional word or a smile to show that she is listening.

All activities listed under *Language Activities* are appropriate. (For a complete list see the *Activity Index.*) In addition, the following activities either involve letters or words or especially encourage production.

Large Motor-29	Looking at Cloud Shapes
Table- 2	Name and Word Puzzles
T- 9	Sewing Cards (Letters)
T-10	Typewriter
T-25	Letters and Numbers
T-26	Copying Game
T-33	Playing Cards
T-34	Lotto
Music- 3	Singing
M- 7	Child Chosen Activity
Social Science- 4	Dress-Up Play
SS- 5	Doll House Play
SS- 8	Grandmother or Grandfather Visits
SS-11	Grocery Store
SS-12	Restaurant
SS-13	Car Wash

SS-14	Gas Station
SS-16	Airport
SS-17	Railroad Train
SS-18	Doctor's Office and Hospital

Books

Obviously all books are basically for teaching language skills; however, the following serve two specific functions: teaching reading or encouraging production through presenting a story without words.

Teaching reading.

Funk, Tom; *I Read Signs*
Randell, Beverley; *The Mouse Who Learned to Read*
Raskin, Ellen; *Nothing Ever Happens on My Block*
Rey, H. A.; *Curious George Learns the Alphabet*

Stories without words (Children can tell their own.)

Amoss, Berthe; *By the Sea*
Hutchins, Pat; *Changes, Changes*
Meyer, Renate; *Hide and Seek*

Chapter 6

Diagnosis and Teaching in the Social-Emotional Area

Introduction

The theme throughout this manual has been that our goal is to help children become active, effective, happy people. The items on the Social-Emotional Checklist represent attitudes and abilities, shown in the child's behavior, which we think are basic to becoming such a person.

The first six sections of the checklist have to do primarily with the way in which the child interacts with his world--his attitudes toward things in his environment and the habitual ways in which he approaches them. (In some cases the things may be animals or people, but in this portion of the checklist, we are not concerned with attitudes which are primarily social.) We ask:

1. Does the child enter activities on his own?
2. Does he stay with something long enough to complete it?
3. Is he curious?
4. Can he set and solve problems for himself?
5. Does he enjoy producing something on his own?
6. Can he pretend?

In the next six sections of the checklist we are concerned with the abilities which make it possible for the child to get along with and enjoy the other human beings in his world. We ask:

7. Does the child trust and like the teachers, but not depend on them too much?
8. Can he accept limits and routines as set for the good of the group?

9. Does he enjoy play with other children?

10. Does he respect others' rights, as well as his own?

11. Does he share and take turns?

Finally, at the end of the checklist we ask the most important question of all:

12. Feelings about self--does the child like and understand himself?

When all of these can be answered positively, we are looking at a child who should be able both to cope with and to enjoy his world. When the answers are "No" or "Rarely," we know that some help is needed.

Critics of schools which stress social-emotional goals often give the impression that these goals are achieved just as a result of having children together, and that little effort is required on the part of the teacher. In fact helping the child in this area requires as much diagnostic skill and careful program planning as does helping the child in motor, language, or cognitive development. There is no excuse for leaving any of these areas to chance.

Not only does the social-emotional development of the child require as much thought as other developmental areas; it also interacts in very important ways with them. To be an effective adult it is not enough just to have a good grasp of basic information. If relationships with co-workers are so poor that it is impossible to work cooperatively on any job, if attention span and frustration tolerance are so low that one cannot stay with a problem long enough to solve it, or if feelings about self are so negative that the possibility of doing a job well offers no satisfaction and hence no incentive, then the facts and skills that a person has learned are not going to be of much use to him.

SOCIAL-EMOTIONAL CHECKLIST

Definitely needs help	Could use help	Adequate	Strength
1. INITIATION OF ACTIVITY			
Rarely initiates activities or has trouble beginning.	Frequently spends long period before initiating or initiates in only one or two activities.	Occasionally needs help in initiation; accepts it readily.	Always involves self in a variety of constructive activities.
2. ATTENTION SPAN			
Rarely finishes task, moves rapidly from one to another.	Usually needs encouragement to stay with task until complete.	Can usually remain with task appropriate to age level until it is finished.	Can stay with a chosen activity for very long periods, even returning the next day.
3. CURIOSITY			
Shows little or no interest in anything new.	Can be intrigued by really exciting things but often uninterested.	Actively explores any new things in the room.	Interested in new ideas, words, and relationships as well as things.
4. PROBLEM SOLVING AND FRUSTRATION TOLERANCE			
Rarely seeks to solve problems on his own; unable to tolerate any level of frustrations; reacts by giving up, crying, or aggression.	Sometimes fails to solve problems on his own; or sometimes reacts to moderate frustration by giving up, crying, or aggression.	Usually tries hard to solve problems and accepts failure well; but if severely frustrated, may behave immaturely.	Is inventive in solving practical problems. If completely blocked, is mature in behavior.
5. PRODUCING AND CREATING			
Does not enjoy productive* activities.	Productive* rarely creative.*	Often creative* sometimes innovative.*	Highly creative* and innovative.*
6. DRAMATIC PLAY			
Never takes part in dramatic play.	Rarely takes part in dramatic play.	Frequently "pretends" with regard to roles, objects, and situations.	Highly creative in dramatic play.

*For definitions see *Producing and Creating, Diagnosis.*

Definitely needs help	Could use help	Adequate	Strength

7. RELATIONSHIP WITH TEACHER
(Note if different with different teachers)

Continually seeks help, contact, or attention; frequently behaves aggressively; or ignores teacher.	Often requires help, contact, or attention; seeks attention through silly or wild actions; or is occasionally aggressive toward teacher.	Warm relationship, and asks for help or attention only when appropriate.	Self-sufficient, may volunteer help or support to teacher when appropriate.

8. ACCEPTANCE OF LIMITS OR ROUTINES

Continually tests limits and routines; or is compulsive about routine (anxious at deviation from schedule).	Frequently tests limits, fails to follow routines, or is somewhat anxious about changes in routine.	Usually conforms to limits and routines, can deviate easily when appropriate.	Understands reasons for rules and obeys intelligently even when the teacher is not present.

9. INTERACTION WITH OTHER CHILDREN

Avoids other children most of the time.	Often rejects advances of others or plays more alone than with others.	Often initiates play with other children and usually accepts initiation from others.	Initiates cooperative play regularly.

10. RESPECT FOR RIGHTS AND NEEDS OF SELF AND OTHERS

Completely unable to protect self, typically bosses others, frequently aggressive, or disrupts others in play.	Frequently unable to protect self, manipulates others (bossy) on occasion, or sometimes aggressive.	Respects rights of others; may hit to protect self, but not without reason.	Respects rights of others but protects own interests, usually verbally. Can take both leader and follower roles.

11. SHARING AND TAKING TURNS

Never shares. Always tries to be first.	Rarely willing to share. Can wait only briefly for turn.	Usually willing to share if has enough. Will take turns.	Is inventive in solving problems related to sharing or play material.

12. FEELINGS ABOUT SELF

Frequently has doubts or is negative about himself and the way others feel about him; often says he can do something he cannot; or refuses to try something he can do.	Seems somewhat unsure of own worth and acceptance by others, or somewhat unrealistic about his abilities.	Has positive feelings about himself and believes that other people like him. Realistically evaluates his strenghts and weaknesses.	

General Suggestions for Diagnosing Social-Emotional Needs and Strengths

As noted in Chapter 3, the Social-Emotional Checklist will usually be filled out early in the school year, but after the children have had a chance to get used to the classroom and the teachers.

As with language, filling out the Social-Emotional Checklist primarily involves taking time to *really look* at each child as he goes about the day-to-day activities in the classroom. Since there are twelve areas to be checked, the teachers may want to look at only two or three children each day. (With social-emotional needs, it is especially important to have more than one person's viewpoint; so two or more of the staff should look at each child.)

For the child's permanent record the school has the choice of using one copy of the long form of the Social-Emotional Checklist for each child or using the short form of the checklist found on page two of the three-page Needs and Plans Sheets shown in Chapter 3. (See *Needs and Plans Sheets, sample.*) In case the short form is used, however, it is very important to have the long form to refer to while rating. For this reason it has been reproduced in the Appendix with a blank on the back side so that it can be taken from the manual, and if desired, mounted on cardboard for easy reference.

By having all social-emotional areas clearly in mind and by making brief notes on a pad of paper during the morning, it should not be difficult to check off most of the areas for each child at the end of the morning or the day. However, it is essential for the teachers who are rating to take time to talk about their impressions of one set of children before moving on to the next set. Otherwise it is too easy to confuse one child's behavior with another's, or to forget just what happened.

As with the Language Checklist, most sections of the Social-Emotional Checklist will be checked off easily (circling the appropriate description or writing it in on the short form). However, there will be a few sections where the teacher will leave a penciled question mark to be filled in with closer observation later. Suggestions for ways of "looking closer" are included below in the discussion of each item on the checklist.

In some cases it will be clear whether the child should be checked as "Definitely needing help," "Could use help," "Adequate," or "Strength," although none of the descriptions listed fit the child. Here it is important to write in just how the child is special in this area. If the long form is being used, there should be enough space on the front; if the short form is used, the teacher may need to put comments on the back. For example, on "Interaction with Other Children," Juana "Could use help"; but the note must be added "Plays well with girls, but very fearful of boys." Or for Bobby on "Sharing and Taking Turns": "Cannot share food or things he has brought from home--otherwise OK."

General Suggestions for Social-Emotional Planning

When planning to meet social-emotional needs, the teacher first must set up priorities. Given a child with many different needs, the teacher should try to start with those which are most basic to the others. Generally, children must feel secure and comfortable with people and with materials before they can go on to more mature behavior. This means that the teacher does not try to help a child develop exploratory behavior or the ability to share until he has developed at least some relationships with either adults or children and some enjoyment of activities.

The order of approach also depends on the cues given by the child. The teacher starts where the child seems readiest to move and goes on from there, continually adjusting her planning to the child's reactions. For example, some nonparticipating children seem readier to move into activities which do not involve any interaction with other people. Others seem unable to do anything until they have a relationship with someone--sometimes an adult, sometimes another child. Generally, teachers should try working on the relationship with the adult first and, if this does not work, could try involving the child with materials or with another child. The same general pattern of teaching applies to teaching of social-emotional skills as applies to any other type of learning:

1. The teacher sets up an experience which is sure to interest the child, and where a successful performance should be possible.
2. The teacher stays with the situation to do everything she can to be sure it is successful.
3. The teacher rewards success in a way which is meaningful to the particular child. If she must use concrete rewards other than those intrinsic in the situation, she uses social or verbal rewards as well.

For example, given Peter who has great difficulty sharing and enjoys food experiences:

1. The teacher plans a cake-baking experience with Peter and Karen, who is flexible and not overly concerned about getting her share. At the end a good deal of batter is left in the bowl, and the teacher asks Peter to draw a line down the middle so that he can "share the batter with your friend Karen."
2. The teacher supervises, not by criticizing, but by praising how carefully Peter is drawing the line to be sure that he and Karen each get half the batter. In case the line is markedly off-center, success is assured by saying, "Whoops, I think your spoon slipped. Why don't you try it again more slowly?"
3. In this case, as in all the best educational experiences, the reward is in the activity, getting to clean out the bowl and at the same time having the teacher's praise for doing such a good job of dividing the batter.

The most important thing for teachers (and parents) to keep in mind about social-emotional skills is that children must learn these skills just as they must learn to throw a ball or to count. And if children are to learn these skills, someone must help them, with as much thought and care as would be used in helping with ball throwing, counting, or anything else the child must learn.

On the following pages we look individually at each of twelve areas of social-emotional development and give specific suggestions for diagnosis and planning in each area.

1. INITIATION OF ACTIVITY

Definitely needs help	Could use help	Adequate	Strength
Rarely initiates activities or has trouble beginning.	Frequently spends long period before initiating, or initiates in only one or two activities.	Occasionally needs help in initiation; accepts it readily.	Always involves self in a variety of constructive activities.

Diagnosis

The child who regularly moves directly to a play area and begins to play as soon as he enters the room obviously is easily checked off on this item. This will be true of many fours and most five-year-olds once they have made the initial adjustment to a new group. There are also children who even after several weeks of school can be checked as "rarely initiating and usually rejects suggestion"--children who spend almost all their time completely withdrawn from the group.

There are some children, however, whom it is difficult to decide whether to place in the "Adequate" or "Could" use help" category.

Some children often take a good deal of time to become involved or spend a considerable amount of time not actively participating, but rather watching what is going on. The teacher will want to respect the personality of the slow-starting, cautious child for whom this is a normal pattern, who wants to be quite sure before he commits himself or who enjoys being a spectator. On the other hand, she will want to help the child who would like to do something, but is afraid, either of failure in the task or of the problem of involving himself with other children. One cue is the emotional response of the child--does he seem comfortable, or wistful and unhappy as he sits on the sidelines? When he does involve himself in activities, does he seem to actively enjoy them; or is he anxious and apprehensive?

If the emotional response seems hard to read, perhaps the best approach is to proceed cautiously as though the child could use help, being alert to cues which might indicate that we are disturbing his natural rhythm.

As a philosophical aside, we obviously are concerned by the child who does not enter into many acitivites because of our belief that "learning by doing" is likely to be broader and more varied than "learning by looking and listening." That is, we feel that the child will get more from school if he is an active participant. However, we place a further value on involvement beyond its usefulness in learning. Throughout this manual we emphasize that our goal for children is to have them become happy, effective creators, rather than, like so many members of our society, simply consumers and observers.

Another type of child who may or may not need help with initiating is the child who goes directly to an activity and stays with it, but who always chooses the same one or two activities. He may just be a child with a single-track mind who simply becomes tremendously involved with any new interest, or he may be using this particular activity to protect himself in a situation which is frightening to him. Again the teacher can watch for cues in the child's response when she tries to interest him in something else or when the day's schedule requires him to move away from the blocks, the doll corner, or wherever he has rooted himself. However, even if the child seems very comfortable in staying with one activity, the teacher may decide after a time that he could use help in moving into other areas, simply because he is limiting his learning through limiting his experiences.

It should be noted that the space provided at the end of the second page of the Needs and Plans Sheets for listing the things which the child enjoys doing will be of help here.

General Suggestions for Helping a Child Initiate Activities

It is assumed that the child checked as needing help has not responded to the usual techniques of bringing some interesting activity to his attention or asking another child to show him something; nor has he begun to move a little toward activities on his own.

The child who does not initiate activities will in most cases be one who avoids other children as well. He may or may not also have a poor or limited relationship with the teacher. If so, it is probably the best strategy to work on the relationship with the teacher and on activities simultaneously, leaving interaction with the other children until later. However, for the child who has had few positive experiences with adults it may be easier to accept another child from the group or a slightly older child from the grade school if the teacher can find a child who can use an unobtrusive approach.

At first the teacher or teacher substitute might just spend some time each day near the child without making even an indirect approach, but noting any fleeting interest which the child seems to show in anything in the room. Later she may bring something with her which she thinks might intrigue him, sitting next to him holding a guinea pig in her lap or rolling a piece of clay, with another piece laid out within reach of the child. Exactly how to proceed then depends on the cues given by the child; but of greatest importance is that the teacher be very watchful--sensitive when the child makes a move toward her or the material--and respond just enough, but not enough to make him withdraw.

When a child is beginning to show occasional interest in some activities, the teacher can try to decide what aspects of the activities he is particularly enjoying and can provide similar ones. (It may be animals, food, music, water, sand play, etc.) Again it is often better to leave the activity near the child rather than trying to move him toward the activity. The teacher must also remember that progress may be slow and that there may be times when he seems to move backward rather than forward.

If the support of another person has seemed to make him more comfortable in entering activities, it is very good if someone can continue to play this role for him, being there when he needs her, but leaving him on his own when he doesn't. (A grandmotherly volunteer may do this very well, but she should be chosen for her sensitivity to children's needs, not just for warmth.) Some of the suggestions for increasing attention span may be appropriate here. (See *Attention Span*.)

This same indirect approach may be used to help a child who works in only one area to interest himself in other kinds of play. However, with a child who has one major interest, there is at least a starting point for movement. For example, Jose, who blockades himself in the block corner, can be asked to help build an obstacle course since he is such a good builder. Leah, who rarely leaves the doll corner, can be encouraged to go find a book that she can read to the dolls.

Activities for Helping Children to Initiate Activities

Because individual interests differ so much, it is difficult to suggest specific activities which will involve all children. However, some activities which are effective in many cases are:

Large Motor-36	Sand Play
LM-37	Water Play
LM-38	Soap Bubbles
Art- 4	Playdough
Language- 6	Puppets
Science- 6	Animals in the Classroom
S- 7	Observing Birds
S-10	Visiting Baby
Social Science- 8	Grandmother or Grandfather Visits

2. ATTENTION SPAN

Definitely needs help	Could use help	Adequate	Strength
Rarely finishes task, moves rapidly from one to another.	Usually needs encouragement to stay with task until complete.	Can usually remain with task appropriate to age level until it is finished.	Can stay with a chosen activity for for very long periods, even returning the next day.

Diagnosis

Rather than trying to describe it in terms of clock time, we define "adequate attention span" in terms of completion of a task appropriate to the child's level. That is, we would expect that the child with an adequate attention span will usually look at an interesting book from beginning to end, will finish a puzzle which is reasonably easy for him, and will stay at the juice table until he has finished his snack. We would not expect him to complete a book which did not interest him or a difficult puzzle without encouragement.

The fact that a child sits quietly during a story or other group activity does not necessarily mean that he has a good attention span. It may merely mean that he is conforming to the teacher's expectation that he should be quiet and not disturb others at such times. It does not mean that he is either listening or learning anything. Therefore, in assessing attention in group activities the teacher should look for signs that the child is actively interested and involved in what is going on, not "tuning it out."

General Suggestions for Increasing Attention Span

Sometimes all that is necessary to help a child stay with an activity is a word of interest and encouragement at the critical point at which he is about to lose interest or be distracted by something else going on in the room. Even the physical presence of the teacher or just handing the child another puzzle piece may have this affect. The teacher should become skillful at assessing when and how much help is needed to keep the child in any situation.

Sometimes the child only needs to learn that carrying through on a project gives a feeling of satisfaction. Here the teacher should be particularly aware of saying to a child, "You *finished* it, didn't you!" or "It was hard, but you did it!" when he has completed a task.

Other children need considerably more help in remaining with a task. They may find it difficult because of a high activity level which makes it hard to sit still or because they are so sensitive to distractions that anything else going on around them takes their attention from what they are doing. For the child who finds sedentary play difficult, the teacher can try to increase the length of time he stays with more active types of play. The same kinds of motivating techniques mentioned above can be applied to the building of block structures or to carpentry projects. The teacher can also introduce the child to the idea that he can leave a task to look at another child's building, to look out the windows, or to get a drink, and then return to finish his project. The teacher could say, for example, "Sometimes it feels good to get up to stretch for a minute." The goal is to help the "fidgety" child to understand his need for periodic release in activity and how to meet it.

For the highly distractable child other techniques are necessary. If a child seems to be unable to sit still under any circumstances, the teacher may want to suggest a medical checkup to be sure that there is no physical cause. However, it often helps to isolate the child partially from the environment by seating him with his back to the rest of the room when he is working or by setting up the tables in such a way that there are only two or three children working together rather than six or eight. If there are several children in a group who are at least mildly distractable or one or more with a severe problem, the teacher may want to rearrange her room to provide for several areas where children can better concentrate on what they are doing. If the room itself does not contain nooks or corners which can easily be isolated, these may be improvised with shelves, tri-wall partitions, or even large cardboard boxes or "blanket houses." Many children who are not at all distractable also profit from the possibility of occasional privacy.

For both kinds of children, highly active and distractable, attention span can be increased by providing series of similar experiences which in the beginning require only a few minutes to complete and get progressively longer. Examples might be: pegboards with only a few holes, going on to those with a hundred or more; stories only two or three pages in length, going on to long books, etc. Again we stress the importance of setting up activities in such a way that completion of the whole--or of a part--is a goal which the child can clearly see and easily achieve. (See *Frustration Tolerance.*)

The teacher should also be aware that she may occasionally be reducing a child's attention span instead of increasing it. This may happen with a slow, but not very persistent child who is often interrupted before he completes an activity because it is time for snack, going outside, or going home. The teacher should try to avoid this by steering him to an alternate activity if she sees that he is choosing something which takes a long time to complete, by giving him extra help at the end, or by letting him be the last to leave the room.

Occasionally a teacher may find herself with a larger number of children or even a total group whose attention span seems very short. However, she should always keep in mind that it is normal for young children to need frequent periods of activity. She may need to examine her program carefully to be sure that the schedule is not asking too much concentration of this particular group. Moving from juice to story time, for example, may be too long a period of sitting still. A story time for the total group at any time in the morning may be too demanding, and so on. It is much better to hold children's attention by using something very attractive (e.g., puppets) for a very brief period at the beginning of the year and to gradually lengthen the period, than to have every group session a struggle between teacher and children. At the same time the teacher who is having trouble holding her group's attention should objectively look at the techniques she is using and if possible observe a teacher who is more successful in order to improve her own "holding power."

Activities for Increasing Attention Span

As with initiating activities, the teacher may make use of almost any type of activity for increasing attention span. The important thing is to choose a particular acitivity which the child *can* finish and to help him to have a successful experience with it.

However, activities such as art or cooking, where the child ends with a product, are likely to have more holding power and more reward value. So try any food project (see *Activity Index* in the back of the book for a complete list), one of the following activities, or any other activity with a clear goal to work toward.

Art-25	Tie Dyeing
A-34	Tracing Around Children's Bodies
A-36	Footprints and Handprints
A-37	Hats and Masks
A-38	Kites
A-39	Holiday Decorations
A-40	Gifts to Make
Table- 1	Puzzles and Formboards
T- 2	Name and Word Puzzles
T- 3	Pegboards
T- 6	Nuts and Bolts
T- 9	Sewing Cards
T-20	Sorting Dried Foods
T-21	Sorting Foreign Coins
T-22	Sorting Household Objects
T-23	Sorting Day and Night Pictures
Science-18	Photosensitive Paper

3. CURIOSITY

Definitely needs help	Could use help	Adequate	Strength
Shows little or no interest in anything new.	Can be intrigued by really exciting things, but often uninterested.	Actively explores any new things in the room.	Interested in new ideas, words, and relationships as well as things.

Diagnosis

The typical preschool child *is* curious--if there is something new in the room, he is drawn to it; he asks questions; he explores. However, we cannot necessarily say that the child who does not do these things lacks feelings of curiosity. He may be the non-initiating child we have already discussed, who is too insecure and fearful to move toward anything new. For him the teacher could simply leave a question mark on this item for the time being--recognizing that one must feel safe and accepted before it is possible to put energy into exploring and being curious. The teacher should concentrate on establishing comfortable communication between him and the people and things in his environment before concerning herself with curiosity.

One diagnostic problem concerns the child who superficially appears interested and curious, but who is actually using questions or exploratory behavior as a defense rather than a way of finding out something. He may ask innumerable questions, but hardly wait for the answer to one before the next one pops out. He may rush toward each new experience, but not really take time to explore it before he is off again to something else. Here again before the teacher tries to decide just how well developed his curiosity really is, she must find out what is behind this pattern of activity.

It is the child who is normally active, initiates familiar activities readily, and seems to enjoy other children, yet who does not seem to be drawn to new activities or to find out new things who will be checked as needing help. For him a primary and immediate goal will be the development of curiosity.

General Suggestions for Fostering Curiosity

The most important element in fostering curiosity is a teacher who is curious herself. Perhaps a better way of saying it is "a teacher who wonders." Wonder implies not only seeking answers to questions, but also a continuing interest once the answer to that particular question is found. The teacher who has the sense that, indeed, the world can be "wonderful," in spite of everything, transmits far more to her children than just the habit of asking questions, as important as that is. Wondering why there are cracks in the sidewalk can lead to questions and answers about simple concepts of expansion and contraction with heat and cold and what happens to the ground when it frosts. But it can also lead to the tactual pleasure of feeling the difference between cracks and smooth concrete, the fun of tracing the cracks to see where they end, trying to decide how an ant would get out of a crack if he fell in, or the satisfaction of an experience remembered each time the group walks over that particular patch of concrete on the way to the park. "There's our old cracked sidewalk again!"

Teachers can try to help the nonexploratory child become a curious one by setting up experiences in the room which will be particularly intriguing--either to the group as a whole or to this particular child--and then by rewarding the curious behavior this child shows with attention and praise. We need to keep in mind that the noncurious child is often one whose curious behavior has not only gone unrewarded at home, but rather has been punished or discouraged by "Don't touch that," or "Don't ask so many questions!" He may need to learn that there are places where questioning and exploring are good things to do. (It may sometimes be necessary to interpret to parents that the child's questions and exploration will help him in "learning how to learn"--something which is very necessary for later success in school.)

For such a child the teacher should be especially alert to pick up glimmers of interest in any topic and to support the child in going further and learning more. The teacher moves very gradually in introducing new experiences to avoid losing ground already gained. She needs to be particularly careful to gauge the level of help she gives to the child's ability to explore on his own. Thus a child who is just beginning to ask questions may need a simple direct answer from the teacher; a little further along the teacher might say, "I know a book where we could find the answer"; and finally, "I wonder where we can find out." (Of course the response depends also on the question, timing, etc.; the most curious child may begin to lose interest if every question means a trip to the encyclopedia--thus the teacher must avoid both "overexplaining" and "underexplaining."

For the whole group, the teacher should frequently introduce new experiences to spark curiosity. She can bring surprises in boxes which can be opened and explored, rewarded by "That was fun, wasn't it?"; she can find some item of junk and say, "I wonder what we could do with this"; or she can provide exploratory experiences which children can enjoy with their friends--for example, going out to see if they can locate where the heat in the radiators comes from.

When reading stories with an element of surprise, the teacher can build up interest in what is going to happen next and can get children into the habit of interested anticipation. This can be done at first with books where the questions are built into the text, as in *The Noisy Book:* "Was it a garbage can going 'squeek, squeek, squeek'?" Later the teacher can insert her own questions, taking care not to destroy the pace of the story.

Activities for Fostering Curiosity

Again it is best to follow the lead of the child in choosing activities especially for fostering curiosity, but a few which are intriguing to many children are listed.

All science activities (See *Activity Index* in the back of the book for a complete list.)

Food- 6	Tasting Game
F- 7	Exploring Food in Various Forms
Language-13	Apron with Pockets
L-25	What's in the Box?
L-26	What Is Gone, What Is New?
L-37	The Sound of Containers
L-38	Identifying Hidden Noises
Music- 9	Music Box

Books

Any book which contains an element of suspense can be used to foster curiosity. These are just a few examples:

Bannon, Laura; *Red Mittens*
Bonsall, Crosby; *The Case of the Hungry Stranger*
Brown, Margaret Wise; *The Noisy Book, The Runaway Bunny*
Carroll, Ruth; *Where's the Bunny?*
Garelick, May; *Where Does the Butterfly Go When It Rains?*
What's Inside?
Knight, Hilary; *Where's Wallace?*
Krauss, Ruth; *The Backward Day*
Slobodkina, Esphyr; *Caps for Sale*

4. PROBLEM SOLVING AND FRUSTRATION TOLERANCE

Definitely needs help	Could use help	Adequate	Strength
Rarely seeks to solve problems on his own; unable to tolerate any level of frustrations; reacts by giving up, crying, or aggression.	Sometimes fails to solve problems on his own; or sometimes reacts to moderate frustration by giving up, crying, or aggression.	Usually tries hard to solve problems and accepts failure well; but if severely frustrated, may behave immaturely.	Is inventive in solving practical problems. If completely blocked, is mature in behavior.

Diagnosis

When we talk about a child's ability to resolve problems, we are usually also talking about his ability to tolerate frustration. They are closely related, but not exactly the same thing. By a high level of problem-solving ability we mean that a child faced with a problem usually reacts with behavior or a series of behaviors which are likely to solve it. If the same child has a high level of frustration tolerance it means that, having failed to solve the problem with the first approach, he tries another and another; or if the problem proves insoluble, he leaves it without becoming seriously upset.

A child with low problem-solving ability gives up a problem without having tried any effective means to solve it. He may show little emotional reaction to his failure; or he may show low frustration tolerance as well by trying to get someone else to do it for him, having a temper tantrum, or sulking. Most children are somewhere in between these two extremes.

In some ways this area of social-emotional development is one of the more difficult to assess, partly because the nursery school or kindergarten is so structured that really demanding problem-solving situations are not frequent for the typical child. Perhaps it is a good idea to set up one activity which may present problems during the time that the teacher is trying to decide which children need help. (However, if there are too many such activities the teacher may be too busy helping to get much assessing done.) A list of these "problem activities" is included at the end of this section.

As with all checklist items there will be some children who can be immediately checked off. This will be especially true of those children who have great difficulty in coping with problems. Their needs in this area will probably have been all too obvious since the first day of school. For the other children, however, one may often put down a question mark or a bracket between two ratings and plan to observe more closely over a period of time. Keep in mind that one or two incidents are not enough to judge from because one must always take into account the situation in which the response occurred. Even the most mature child (or adult) will be likely to act immaturely or illogically under really severe stress, or when he is very tired, hungry, or ill.

General Suggestions for Helping Children Learn to Solve Problems and Cope with Frustrations

Helping the Child Develop Confidence

The child who gives up easily needs first of all to begin to think of himself as a person who is capable of succeeding rather than as someone who always needs help or who always fails. It may be assumed that this child lacks problem-solving skills either because his environment has been so frustrating that he has continually met with failure and expects nothing else (as may for example be the case with a retarded child) or because the people in his family have gone so far in gratifying and anticipating his needs that he has never learned how to meet them himself. In either case the teacher starts out to give the child the feeling that he is competent through a whole series of successes.

In the most severe cases she is faced with the problem of finding tasks which will be so attractive to the child that he "must" try them, and so easy that he "must" succeed. Examples might be opening a box with a simple catch to get and eat a cereal bit, putting together a two-piece puzzle, or matching a simple series of colored plastic forms. When he has learned that he can do such tasks successfully every time, something more difficult (but still easily accomplished) can be added. Once a pattern of acting for himself is established, the teacher can move on to an occasional challenge while she stands ready to provide reassurance and support.

Avoiding Feelings of Failure

For all children, whether they begin at an extremely low level or not, the most effective way of increasing problem-solving ability may be to alternate success experiences with tasks which present just enough of a challenge that they must work harder, improve their skill level, or figure out some new approach. For example, a new puzzle may prove impossible to complete the first time; but if it is not too difficult, the child can ask for help from the teacher this time and do it on his own the next time. That is, the child will occasionally be faced with failure, but it should be a failure which contains the possibility of being turned into success in the reasonably near future.

In fact, it is only because adults are so used to thinking in terms of "success" and "failure" that we use these words. "Failure" has come to mean not just an inability to do something particular, but also an emotional response of being inadequate or "no good." We would like for both children and teachers to see an unachieved task *not as a "failure," but simply as a problem to be solved.*

Teaching Methods of Problem Solving

The teacher can teach techniques of problem solving by helping out in a situation where the child has tried hard without success, before he begins to feel really frustrated. In some cases this may mean realistically pointing out to a child that the task he has chosen is beyond his present ability level and suggesting an alternate. (Since in practice the child often chooses his own activity--and we want him to do so--the careful pacing suggested above will often not take place.)

In other cases the teacher may make a series of suggestions to help a child to resolve the problem. Sometimes this involves getting him to state the problem and what he has tried to do to solve it, then trying to get him to think of another solution, thus giving him help in such a way that he learns about problem solving in the process.

As an example, take a child who had gotten a small ball stuck in a mailing tube and was trying unsuccessfully to get it out by shaking it. The teaching sequence went something like this:

Teacher: "What's wrong, Jimmy?"

Jimmy: "The ball's got stuck."

Teacher: "Shaking doesn't seem to work. I wonder if there's another way to get it out?"

Jimmy: (Blank look)

Teacher: "Maybe you could poke it out with something."

Jimmy: (Jimmy looks around the room, but doesn't see anything.)

Teacher: "Let's walk around and look."

Jimmy: (Still no response)

Teacher: "I wonder if that mop handle might work."

At this Jimmy comes to life, takes the mop and pokes out the ball. Thus he has had both a success experience and a step-by-step lesson in problem solving. With a child with lower frustration tolerance the teacher would probably have combined two or more steps. In another case a more advanced child would have taken over the process himself without nearly as much help. The teacher needs to be sure that she does not behave like most grown-ups and just take over the frustrating job herself, unless it is clearly a "grown-up job" like getting something off a high shelf or pulling a nail out of a board where all of a child's strength is insufficient.

Problem solving may also be taught in the context of situations in which the child is curious rather than frustrated. In this sense learning how to solve problems is basic to the child's future intellectual growth. It might even be called learning the "scientific method." In the section on curiosity, we have already discussed the first steps--helping children to be curious and teaching them where they might look for answers to their questions. Going beyond this, we want children to develop ways of finding out things for themselves. Hopefully a child who has been given many experiences in problem solving will think first and ask someone else only if he cannot come up with the answer himself by thinking or experimenting (or "spearminting" as one enthusiastic four-year-old scientist called it).

The teacher can help children learn the problem-solving process through her responses to their questions and problems, suggesting steps which might be taken to find answers. For example, the activity *Experimenting with Floating and Sinking* was developed in an informal way to let children answer the question "Why does a block float and a rock sink?" The teacher's part in this activity is to wonder, "What else floats and sinks?" and as children experiment with everything loose in the schoolroom that could tolerate being wet (teacher guidance suggested), the teacher's part is to suggest putting all the things that float in one box and all the things that sink in another. Then at the end she can ask, "How are the things in the floating box alike?" "How are they different from the things in the sinking box?" When the children come up with, "These are light and these are heavy," the teacher helps them take the next step--checking their findings. "I wonder how we could be sure the wood floats because it's light?" If a child does not suggest "Make it heavier," she takes the next step for him: "Is there any way we could make it heavier to find out?" Finally, if necessary the teacher can suggest pounding in nails and adding metal washers to see if the board sinks as it gets heavier. (This explanation, of course, is oversimplified because it does not discuss the relationship of size and weight. On another day the teacher would want to be sure to bring to the children's attention the fact that a very heavy board still floats and a very light pin sinks and to ask if they can figure out why.)

The role of the teacher is a subtle one; she must continuously evaluate when children are making progress on their own, when she must ask a question, when to stand back, and when to help. Occasionally she must decide that the "spearmint" didn't work out as she or the children had anticipated and be ready to explain why it did not work. Of course she must also help the child to decide in the first place whether to experiment or seek an authority (herself, someone else, or a book). The children must learn that no amount of experimenting can tell them the name of a new bird or why some trees lose their leaves and others do not. (On the other hand, the teacher can also help them experiment in their minds. "We can't find out where the wild geese are going without looking in a book, but how could a scientist find out?" or "If a grown-up wanted to find out what it's like at the bottom of the lake, how could he do it?")

Teaching Productive Ways of Handling Frustration

In the first place the teacher should try to reduce the situations in the classroom which cause *nonproductive* frustration--those that the child cannot possibly manage to resolve. A classic example is boots that are too tight. For some, plastic bags over the shoes work. If not, the teacher should, one way or another, get the child some boots that fit. She has to consider her own frustration tolerance too!

Avoiding unnecessary frustration also involves being sure that equipment works properly--a child learns nothing from trying to use dull scissors that will not cut or from putting together a puzzle which turns out to have two pieces missing. It also means that the teacher should be very careful to test out any piece of equipment which is new or that she or someone else has invented to be sure that it works. For example, a student who brought in a flimsy balance with paper plate balance pans which dumped anything put into them, learned an important lesson--but the children whom she was trying to teach learned nothing (except possibly that grown-ups get upset when something goes wrong, too).

Next the teacher should give specific guidance in handling frustrating situations. The process might go like this:

1. Help the child to state the problem.
2. Help him think of a solution and try it out.
3. If the solution does not work, recognize his feelings of frustration as normal.
4. Suggest how he can express them acceptably.
5. Later try to help him find a solution or decide how to avoid a similar frustration.

To a teacher who has just had to cope with a screaming, block-throwing Terry whose "Empire State Building" has fallen down for the third time, this list may seem ridiculous. Actually the process is about the same regardless of the degree of frustration but the steps are handled differently.

The teacher should try to move into a situation before the child gets to the point where he can neither listen nor think. Thus when Terry started building his tower in the same way the second time, the teacher might help him to see that it fell down because it was too tall and narrow and to think through a change in design to make it more stable. If it still fell down, she could move in quickly and say, "It looks as if it *really* makes you *mad* when something falls down after you've worked so hard on it," encouraging the child to verbalize the way he feels. Then, she might say "Let's see if we could build a much thicker building this time"; or "I'll help you put the blocks away now and tomorrow you might try to build against the wall so it will be more stable"; or, helping the child to recognize reality, "I guess we just can't build Empire State Buildings out of our blocks. We'd need steel and concrete to make it right."

However, if she either had not been aware of the impending disaster or had not been able to step in earlier because of other crises, the teacher might well have to deal with a Terry who was far too frustrated for logical problem solving. Here she must stop him from hurting himself or others, usually by simply holding him until he calms down; but then she cannot neglect the teacher role. When he can listen to her, she sums up the first three steps briefly but clearly: "I know you tried very hard to build a very tall building, but it kept falling down--and I think that it made you so *very very* angry that you wanted to scream and throw things. But I couldn't let you throw things because it might hurt people or break windows." At this point the child might have blown off enough steam and be ready to do something else. If not, the teacher might encourage him to talk about his frustration or might say, "I think you're still very angry--would you feel better if you could pound on some clay?" For some children release of anger may take the form of pounding clay, a Bobo, or a hammering board. Others may not need a physical release, but just some time on the teacher's lap or time alone in the reading corner before they rejoin the group.

Obviously every child and every situation is different; and the teacher must be very sensitive to just what will work best at that particular time; but it is essential to keep in mind:

1. *Try to teach children to solve problems before they become frustrations.*

2. *When problem solving fails, teach children that feelings of anger are normal and accepted; but that the expression of these feelings must not harm others or property.*

In the area of problem solving and handling frustrations the teacher again has a chance to teach through example by her own behavior under stress. It is more helpful for the children to see that teachers have problems and have to cope with them than for them to feel that grown-ups are all-powerful and never feel frustrated. Thus the teacher can go through the problem-solving process out loud. "Oh, I just remembered, Miss X was supposed to mix the finger paint; and since she's sick, it didn't get done. I wonder what else we could do that's special and won't take any extra fixing...We can't use playdough because we used it all up on Monday...Let's try chalk printing--we haven't done it for a long time and all I need are some helpers to bring water to the table." She can also ask for help in solving her problems if she can take the time to make use of the suggestions. If she does ask for help, she should explain carefully when a suggestion is not possible, and should accept at least one suggestion even if not quite what she had in mind.

The children also need to see what the teacher does when she is really frustrated, to see her feelings when appropriate. For example, the teacher might say, "It makes me *so mad* when this window gets stuck. We'll just have to have our story in the other room until Mr. Brown can come to fix it. It's too cold here." Hopefully she can also provide them with object lessons in the use of humor to reduce tension. It is difficult to help a child to laugh at his own problems without making him think you are laughing at him; but the teacher who can burst into laughter (and mean it) if someone spills juice in her lap or when a whole series of minor frustrations occur can help children learn to use this valuable release.

Activities Which Are Likely to Require Frustration Tolerance

Large Motor-12	Pulling Equipment with Ropes
LM-33	Hammering Nails
LM-34	Woodworking
Art-27	Styrofoam Sculpture
A-28	Wood Sculpture
Table- 6	Nuts and Bolts
T- 7	Fitting Lids on Containers
Science-22	Pulleys
Food-21	Citrus Fruit Juice
F-22	Cracking and Shelling Nuts

Activities Which Help Children Release Feelings (Tension Reduction)

Large Motor-33	Hammering Nails
LM-34	Woodworking
LM-37	Water Play
LM-40	Making a Mess
Art- 1	Tempera Painting
A- 3	Clay
A- 4	Playdough
A- 9	Finger Painting
Language- 6	Puppets
Social Science- 2	Washing Windows
SS- 3	Washing Dolls and Clothes
Music- 1	Listening to Music
M- 2	Moving to Music
M- 3	Singing
M- 4	Musical Instruments
M- 6	Dancing in Wet, Bare Feet

5. PRODUCING AND CREATING

Definitely needs help	Could use help	Adequate	Strength
Does not enjoy productive activities.	Productive; rarely creative.	Often creative; sometimes innovative.	Highly creative and innovative.

Diagnosis

This social-emotional goal was not included in the first edition, not because we felt at that time that it was unimportant, but because we could not decide how to define it. Creativity is something which many people value, try to teach, and argue about, but about which there is little agreement. In fact, many books have been written in an attempt to pin down just what creativity is. Finally we have decided to define what we are looking for and how to teach it in simple-minded terms and hope that the readers can fill in between the lines with their own ideas.

As we noted in the introduction to this chapter, our emphasis throughout has been on teaching children to be active, effective, happy people. Production and creativity are closely related to these goals and to the four social-emotional areas discussed above. In fact, it is often hard to know where one goal starts and another stops. For example, one speaks of "creative problem solving" or "productive curiosity." However, we have arbitrarily narrowed the diagnosis in this area to three questions:

1. Productivity: Does the child seem to gain satisfactions from producing *something?* (This may be a physical product such as a painting, a wooden boat, or a pan of cookies; or it may be a song, a dance, or a somersault.)

2. Creativity: Is the satisfaction which the child seems to feel the result of pleasure in the act itself; or does it arise either from pleasing the teacher or mother, or from doing something bigger, better, or faster than someone else?
3. Innovation: Does the child produce things or ideas which are new or different from those of other children or teachers?

That is, we are saying that some people get genuine pleasure from achievement, but only in relationship to other people who have been impressed or bested in the process. We realize that this can be a very effective motivator and we would rather have children producing for this reason than not producing at all. However, what we would seek for children (and ourselves) is the satisfaction which comes from having done something well, whether anyone else knows about it or not.

The problems of diagnosing, once this simple definition is set, are not so difficult. First of all, it is easy to see whether a child does produce, keeping in mind that a product in some cases may be a solution to a problem or an insight rather than a thing. Second, does he seem to feel good about his product even if there is no one else around? Does one see Linda smiling as she whirls to music all by herself? Does Albert hold his picture up at arms length to admire it before showing it to the teacher? Conversely, does Turan only climb to the top of the jungle gym to beat someone else there? Does Felice *always* want her picture put up on the wall? (This is not to say that children should not seek the approval of others, but only that it should be secondary to the pleasure they get from pleasing themselves.)

It should be noted that one frequent criterion for creativity--whether the product is novel or a new idea--has been described here as innovation. For one thing, if a child has never seen something done before, it is new to him, no matter how often the teacher has seen it. However, beyond this, if a child feels good about something he has copied, for him the experience is not that different from the creation of something original. We want to encourage him to use his own ideas rather than those of others; but at this stage, originality would not seem to be nearly as important as the kind of inner satisfaction we have been talking about.

General Suggestions for Fostering Productivity and Creativity

First, encouraging productivity as a goal is really putting together what we have said about initiating activity and increasing attention span earlier in this chapter, except that there is an emphasis on activities which produce something:

1. The teacher looks for activities which seem to interest a given child and encourages him to take part in them.
2. She further encourages the child to stay with whatever he is doing to the finish, until he has a product which is meaningful to him.

The second goal, fostering a personal pleasure in one's own product--creativity--is not so simple, especially in our approval-seeking, competitive society. However, the teacher can work toward it by her own attitudes, comments, and example.

One way to foster creativity is to steer the child toward activities which he has shown an active interest in or enjoyed before. That is, if a teacher suggests that Timo make a picture for his mother for Mother's Day because all the children are doing it, she is putting adult approval first. If she suggests, instead, that he gather a weed flower bouquet because she knows he is interested in and enjoys flowers, she is putting his own feelings first. (Or better yet, she can see if each child has his own idea of what his mother would like best.)

Another way to help children find a personal pleasure in their own products is to avoid competitive situations wherever possible. As Pirkko gets up from her leap off the end of the obstacle course, the comment should be, "What a long, long jump!" not, "You jumped the farthest of all!"

The teacher can also phrase her reinforcement, not in terms of her approval, but as an interpretation of the child's own pleasure. Thus not, "I like that picture," but "You must like red a lot to make such a beautiful all-red picture." While one does not want to avoid approval by the teacher altogether or always focus on the child's feelings, the general attitude should be, "You must be proud of yourself." Note that even above where Pirkko is praised for her jump, it is in terms of the objective character of the jump rather than the teacher's feelings about it.

To encourage the creation of the child's own ideas, rather than copying, the teacher should use copying projects only when she has a clear educational objective (such as in the perceptual-motor area). Even then she emphasizes, "Most of the time it's fun to draw our own ideas, but once in a while a copying game is fun." She is careful not to make children who copy feel badly, but reinforces the child's own or novel ideas. (If one child complains that another is copying, she can point out that the latter is doing it because he thinks whatever the first child has done is nice.)

As always, the teacher serves as a model in this case by showing her own pleasure in accomplishment. It might seem that the classroom offers little opportunity for creativity on the part of the teacher which would be obvious to the children; but she *can* take clear pleasure in a cleaned off shelf, a new obstacle course set up, or a homemade storybook. Even more frequent are the occasions when children and teacher can enjoy a creative experience together: a cake for the janitor's birthday, a playground swept clean of leaves, or a spring mural *ten feet long* for the hallway.

Activities for Fostering Productivity and Creativity

Here the list could be endless. Any activity which gives children a chance to produce anything, or to be free to work out their own ideas to any meaningful end, can be used as a teaching situation to encourage the child to take greater pleasure in production or creation. Most of the art and food activities provide the possibility of producing something. (For a complete list see the *Activity Index*.) The following are a few examples of other ways:

Large Motor-13	Stunt Mat
LM-34	Woodworking
Language- 3	A Child's Own Book
L- 4	Making a Book
L- 5	Acting Out Stories
L- 6	Puppets
L- 8	Flannelboard
Science- 1	Plants in the Classroom
S- 3	Collecting and Pressing Flowers
S- 4	Preparing Leaves
Music- 2	Moving to Music
M- 3	Singing
M- 4	Musical Instruments

6. DRAMATIC PLAY

Definitely needs help	Could use help	Adequate	Strength
Never takes part in dramatic play.	Rarely takes part in dramatic play.	Frequently "pretends" with regard to roles, objects, and situations.	Highly creative in dramatic play.

Diagnosis

Defining when a child is involved in dramatic play is sometimes a problem for the teacher. Frequently such play takes place in the doll play corner, with blocks, or in the sandpile; but not all doll, block, or sand play is dramatic. The essential element is that of "pretending." We are looking for:

1. Role play: Playing at being someone else; for example, a mommy, a teacher, or a mechanic.
2. Make believe about objects: Pretending that an object is something else or that one has something which is actually not there; for example, using a block for a cup of coffee or offering an invisible plate of cookies to the teacher.
3. Make believe about actions and situations: Saying that a place is somewhere else or that something has happened; for example, "Let's pretend we're on the ocean and there's a big storm" or "Let's pretend you had to go to the hospital, but now you're well again."

Thus a child who spends a lot of time in essentially manipulative play with dolls, blocks, or sand may need help in pretending to feed the baby; in building something instead of just piling up blocks; or in seeing sand as food, concrete, or a road down which trucks can be driven.

General Suggestions for Helping Children Develop Dramatic Play

The question might be asked, "Why is dramatic play so important?" Actually teachers in traditional nursery schools and kindergartens have always emphasized the importance of helping children understand their social world by taking the roles of adults. However, recently Smilansky has hypothesized that the very process of pretending may be basic to the later development of abstract thinking.[1] That is, pretending that one is holding a non-existent cup of coffee may be a prelude to understanding the meaning of such words as "justice" which also are "not there" in any physical sense. Playing at being a mailman may be a first step toward really being able to look at a situation through the eyes of someone else, a critical step in the education of a psychologist, minister, politician (or human being). Although there is not yet clear proof that this is the case, we feel intuitively that these relationships make enough sense that dramatic play should be a part of our "curriculum."

Smilansky feels that successful teaching of such play involves two parts. First, it involves stimulation of play through giving props, reading stories, seeing films, making field trips, etc. Second, and more basic, successful teaching of dramatic play involves direct teaching of dramatic skills. In addition to the three behaviors listed above under Diagnosis, Smilansky would also work for:

1. Persistence: Staying with a role for ten minutes or more.
2. Interaction: Playing with one or more children in a role situation.
3. Verbal communication: Talking with another child during the role play.

When a teacher finds that a particular child is not doing one or more of these things, she can move into the play to help, either by suggesting that he might do something or by playing a role herself and thus modeling how one role plays. For example, if the teacher sees that a child does not use make-believe objects, she might pretend to hand him some money and say, "Could you please go over to the store and buy me a bottle of milk?" If a child did role play, but only for brief periods, the teacher might increase his span by bringing him an interesting new prop or suggesting an elaboration of the play. In taking a role herself the teacher shows a child how to play one; for example, pretending to be a mother bringing a child to the doctor, she might say, "Doctor, my baby had a fever all night. Let me take off her clothes so you can examine her," pretending to remove nonexistent clothes from the baby.

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[1] Sara Smilansky *The Effect of Sociodramatic Play on Disadvantaged Preschool Children*, New York, Wiley, 1968.

Once children incorporate these elements into their play, the teacher no longer plays with them, but instead concentrates on providing stimulating experiences, necessary information about their roles, or helping in finding props, etc. However, since the goal for long-term educational purposes is to have play become more and more abstract, the teacher's choice of props should be directed to provide as much opportunity for pretending as possible. Thus if a child needs a baby bottle he might first be encouraged to pretend he had one in his hand; if he did not accept this, to use a cylindrical block; and only if he refused this, to try to find a real bottle. (Of course, the teacher will keep in mind the level of the child--if he is just beginning to play dramatically, she would probably seek out the bottle first.) The same sequence is true of dress-up clothing or dollhouse materials. Both should be provided for all kinds of dramatic play; but the more advanced the group is the fewer props they need.

Activities for Dramatic Play

All activities in the Social Science section can be used to encourage dramatic play. (For a complete list see the *Activity Index.*)

Large Motor- 5	Large Packing Cartons
LM-12	Pulling Equipment with Ropes
LM-15	Move as the Animals Move
LM-35	Blocks
LM-36	Sand Play
LM-37	Water Play
Language- 5	Acting Out Stories
L- 6	Puppets
L- 8	Flannelboard
Music- 2	Moving to Music

7. RELATIONSHIP WITH TEACHER

Definitely needs help	Could use help	Adequate	Strength
Continually seeks help, contact, or attention; frequently behaves aggressively; or ignores teacher.	Often requires help, contact, or attention; seeks attention through silly or wild actions; or is occasionally aggressive toward teacher.	Warm relationship and asks for help or attention only when appropriate.	Self-sufficient, may volunteer help or support to teacher when appropriate.

Diagnosis

The scale above is one of the easiest of the social-emotional scales to check. The teacher cannot help being aware of the child's reaction to her, though she may often not know the basis for avoidance, hostility, or overdependence.

It is important to circle the type of problem, when the child is checked as needing help, or to write in other types of problem behavior. For example, the teacher might write, "Delights in teasing adults" or "Very anxious for teacher approval, but rarely contacts." The teacher should also note differences in approach to different people in the classroom, for example, "Strongly prefers Mrs. Olivares" or "Fearful of men."

General Suggestions for Helping Children Establish Relationships with Teachers

Our goal is to help each child to develop relationships which are positive, in which he is comfortable enough to ask for help when he really needs it, and which are open enough that he can express both negative and positive feelings toward adults as appropriate. Although such relationships can and should offer real satisfactions to the teacher, it is not for her own ego that she hopes to achieve them, but rather so that she can be most effective in her role as a resource person and set the stage for future good relationships with other adults. In her minute-by-minute interactions with the child, the teacher tries to move him toward independence at a rate and in ways which are right for him.

To achieve these goals, the teacher must first prove herself as a person who has something to offer and who is safe to trust. This proving must be done in relationship to the total group rather than just in her interactions with the particular child. "Something to offer" is not just in terms of interesting activities, but also in terms of being a person who offers security and protection--protecting children from others and from themselves. "Safe to trust" means that the teacher will keep her promises and be fair--that if she inadvertently breaks her word or is unfair, she will be able to admit that she was wrong and say that she is sorry. (Young children of course often do not think in such terms, but they come to recognize the trustworthy or untrustworthy person without having to put their judgment into words.)

In more practical terms, the teacher tries to begin her relationship with each child in the group even before school starts. She may send a letter or card directly to the child telling him that she is his new teacher. If she goes for a home visit, she may bring something from school for him to play with; or if he comes to school with his mother for a visit, she is sure that there are interesting activities. In either case she follows his lead in her response to him. On the first day of school she is sure that she is on hand to greet each child and call him by name.

From then on, she leaves the overtures up to the child, responding appropriately if he makes a move, but being careful not to overrespond. For most children who have had positive experiences away from home and with adults other than family, the relationship with the teacher develops gradually and smoothly. At first she is seen as the "proprietor" of an interesting place and a resource person; later she becomes a most important person in her own right--*"my teacher."*

One point to keep in mind is that the desire for close physical contact which we usually associate with young children is not always present. Sometimes a smile or a word of warmth is more appropriate. Some teachers have found that children like to be given a choice as to how much physical contact they want. For example, "I'm so proud of you--that was a really hard job to pick up every single block--would you like a hug or a handshake?"

The Shy Child

At first some children are very shy or even afraid. Here the teacher tries to let the child learn from a safe distance that there is nothing to be afraid of. Then she may try the technique previously mentioned of sitting near the child and playing with clay or play-dough or holding an animal. When the child makes a positive sign or move, whatever the situation, she should make a clear but restrained response to be sure not to frighten him back into his shell. (The analogy to helping an animal feel safe enough to come near a human being is very close.) Gradually the child will feel safe enough to accept attention initiated by the teacher. Ideally, the mother should be available in the classroom during this period of adjustment. If this is not possible, it sometimes helps if the shy child can have a safe place from which to watch or to retreat to if necessary. This might be a protected corner by the fish tank, a hassock in the book area, or his cubby if the lockers are in the main room.

The Dependent Child

Actually in practice the teacher is much more likely to have problems with the child who clings, who wants to make her a second mother, who cannot share her with other children. Here she tries to verbalize the child's wish to have her all to himself, while interpreting to him that she is the teacher for all the children and helping him to accept the limits which she has to place on her relationship with him. One teacher in a day care center whose group includes many dependent children, found that she could say to a child who wanted to sit on her lap at a time when it was impossible, "I'm sorry; I'd like to hold you; but I can't until it's our time after lunch." Then she provided a brief time for each child who wanted to be held, by a nap time ritual in which children looked at books on their beds, then came up as they finished one at a time to be held and tucked in. Other teachers have done this after nap time or, in half-day schools, as children looked at books while waiting to be picked up at the end of the morning.

Rationing affection can be especially difficult in the case of the emotionally deprived child who makes a real appeal to the teacher's sympathies. She must, however, keep in mind that it is not fair to a child who must give up a relationship in nine months to permit him to develop a strong dependence which he cannot maintain. Rather the teacher should try to find a number of people--aides, volunteers, janitors, etc.--who can give the child a lot of attention and affection in a less intense form than a single relationship with his teacher provides.

At the same time she should try to set up situations in which the child can behave independently and to reward him for doing so. Further, even more than with most children, the teacher needs to put a primary emphasis on developing the child's inner resources through making him as capable as possible and as positive about himself as possible. (See *Feelings About Self*.)

The Aggressive Child

In most cases aggression toward the teacher or toward all adults goes along with a more general problem of difficulties with accepting limits and low frustration tolerance. Some of the ways of working with these problems are discussed in the sections on *Problem Solving and Frustration Tolerance* and *Acceptance of Limits and Routines*, in this chapter.

Sometimes, however, a child who is reasonably civilized in his approach to activities and other children seems to actively dislike one or more of the adults in the classroom. Sometimes this reflects the child's feeling that liking a teacher is being disloyal to his mother; at other times it reflects a distrust of adults in general, based on bad past experiences. With the hostile child, the teacher can use the same kind of "watch and wait" approach as with the shy child. She should give the child time to see what the teacher has to offer and respond to him only when he has made the first positive move. At the same time, it may be necessary to make clear that physical aggression toward the teacher is not permitted. Verbal aggression must be calmly accepted. For example, in response to "I hate you. Go away." and a well directed kick, the teacher might say, "Yes, I know that you don't like me. You don't have to like me, and you can tell me to go away, but you may not kick me." Gradually if the teacher can give him no reason to hate her and many reasons to like her, and if she is patient, this child too can be reached.

Some General Comments on Teacher-Child Relationships

In all of this discussion we have hardly touched on the other side of child-teacher interaction, which is how the teacher feels about the child. We know that teachers are human, that they cannot avoid liking some children better than others, and occasionally even disliking a child who for some reason "rubs them the wrong way." The following suggestions for the teacher should make it possible for her to interact more effectively not only with children whom she does not care for, but also with children for whom she cares too much, and all those in between.

The Teacher Need Not Always Be Involved with Children

Because we react against the stereotype of the traditional grade school teacher who served always as a lecturer or disciplinarian, we often tend to feel that the more the teacher is *actively with* the children the better. In fact we should question in the preschool the teacher (often a student or volunteer) who interacts continually and at a childlike level with the children. Where there are many situations where the teacher will "play with" the children, it should always be for a purpose, not just for her own satisfaction. Most of the time when the teacher is actively involved with the children, it will be as a helper and resource person, not as another child. Moreover there will be many times when she will be providing the best educational experience if she steps into the background and lets the children learn from each other or from working through whatever it is that they are doing on their own. The judgment as to when to be involved, and when to be (seemingly) uninvolved is one of the most subtle and important skills that a teacher must learn. She learns it by observing carefully what happens when she moves into a given situation with a particular child, or alternatively noting what happens when she stays out. The next time she may decide to do it differently.

The Teacher Is Usually Involved with More Than One Child at a Time

Of course there are times when a child needs a teacher to himself; some of the times are when he is hurt, ill, upset, or is trying to work through a very special problem. In general, however, the teacher will be meeting more educational goals if she can involve two or three children in whatever experience she tries to provide for the individual child who needs it. If a child asks her to read a story and she has time to do so, she looks around for a few others who might appropriately join in (that is, who are somewhat at loose ends and who would enjoy or learn from this particular book). If she is trying to involve a shy child with the guinea pig, she brings along another quiet, nonthreatening child to join in. By working whenever possible with two or three instead of one, a teacher avoids many of the problems of dealing with her personal feelings, positive or negative, about an individual child.

The Teacher Tries to Avoid the "Halo" Effect

By the "halo effect" we mean that we tend to let our general impressions of children affect the way we see everything they do. A teacher is likely to see the same act very differently depending on whether she sees the child who does it as one who is uncooperative and pushes limits or as one who is generally helpful. For example if the first child bumps into another child and knocks him down, it is likely to be interpreted as a deliberate attempt to hurt; while if the second child does the same thing, it is likely to be called an accident *even if the teacher has no evidence for either conclusion.* We need to work as hard as we can not to let our past impressions affect the way we handle a child in the present. Otherwise many positive acts on the part of a child may be ignored or misinterpreted. (For a much more detailed, but excellent, discussion of this see *Between Parent and Child* and *Between Teacher and Child* by Haim Ginott.)

It is, however, necessary at times to cope with these personal feelings about children. One practical solution is to discuss these feelings with other staff and decide that the staff member who is least emotionally involved with a child will try to handle problems which he presents. Fortunately there are great differences between teachers in these personal feelings. Often one teacher can cheerfully help the weepy whiner through a difficult morning but has to grit her teeth to cope with a loud, bossy child, while another teacher's reactions will be quite the opposite.

Activities for Helping the Child Establish Relationships with the Teacher

Again the best opportunities for interaction between teacher and child are those activities which the child particularly enjoys. However, the activities listed below seem to be ones in which many children are more ready to accept the teacher:

Large Motor-21	Bean-Bags
LM-22	Ball Play
Table-34	Lotto
Language- 1	Books
L- 2	Storytelling
L- 3	Child's Own Book
L- 6	Puppets
L-10	Tape Recorder
L-13	Apron with Pockets
L-14	Mirrors
L-18	Whisper Tube Talking
Science- 6	Animals in the Classroom
Music- 8	Singing About a Child
M-10	Imaginary Music Box

8. ACCEPTANCE OF LIMITS AND ROUTINES

Definitely needs help	Could use help	Adequate	Strength
Continually tests limits and routines; or is compulsive about routine (anxious at deviation from schedule).	Frequently tests limits, fails to follow routines, or is somewhat anxious about changes in routine.	Usually conforms to limits and routines, can deviate easily when appropriate.	Understands reasons for rules and obeys intelligently even when teacher is not present.

Diagnosis

By the time that the teacher is ready to use the Social-Emotional Checklist, she should be fairly well aware of where each of her children falls on this scale. Routines are one of the inescapable parts of each day's activities and the child who is resistant is only too obvious. However, it is important to try to assess whether the child is having difficulty with the routines themselves or is using them to express aggression or get attention. Because such diagnosis and plans are interrelated, they are discussed below.

The overconforming child may present questions. If there are one or more children whom the teacher thinks of as always cooperating, she should spend some time observing to see whether this cooperation seems to be accompanied by anxiety as to the consequences of nonconformity, or by overconcern about pleasing the teacher. Symptoms of this might be panic at a spilled glass of juice, leaving a highly interesting activity at the first suggestion that "it's almost time to pick up," or concern over the behavior of others who are less conforming.

General Suggestions for Helping Children to Accept Limits and Routines

Structuring the Program

In this area the teacher needs first of all to look at her own attitudes. It is surprising how often we find ourselves feeling that acceptance of routines is something which children should do *naturally*, and that the child who doesn't do what we ask him to do is being deliberately negative or perverse. (We often have the same kind of feeling about sharing, taking turns, or not hitting other children.) We often forget that cleaning up when asked to do so or sitting at the table for juice or listening quietly to a story are abilities which must be learned just like riding a tricycle or cutting with scissors.

This may apply particularly to picking-up time. It is not really a moral issue whether a child picks up everything which he has taken out. Rather, responsibility for his own actions and things is a goal toward which the teacher must work like any other goal, and the beginning may involve considerable help by the teacher and only token participation by the child. At the same time it is important that the teacher let the child know that some day soon he will be able to do it by himself.

Thus, as with any other teaching the teacher starts by finding out where the child is and moves on from there. At the beginning of school she makes the routines as simple and easy to follow as possible. The teacher makes very clear to the children what is expected, but provides help or alternatives for the child who cannot do it. She avoids direct confrontations whenever possible. For example, the teacher may imply that to sit at the table and have juice with the other children is what is expected of everyone. However, she makes no attempt to force the child who refuses, but rather says, "Perhaps you'll want to have juice with us tomorrow." Her long-term treatment of this particular problem, if it persisted, would depend on her diagnosis of whether the child is refusing from fear of the group or as a testing of limits. In the first instance she might give the juice to the child at a separate table, but move the table very gradually toward the group over a period of days. In the second instance she might ignore the child for a number of juice periods until she felt he was ready to join, and then give him a face-saving way of doing so, e.g., the birthday party of a friend.

The teacher must also make clear what are the accepted alternatives to the routine. Thus children may not be required to join the story group, but neither may they run around or play with blocks. Rather they must look at books on another rug or play with table toys quietly in the next room. The teacher must at the beginning of the year have another adult available to enforce these limits, if necessary by taking the child from the room.

It is obviously not possible to help simultaneously a large number of children who are not accepting routine without a large number of adults. If this is the case, the teacher needs to look very carefully at her plans. Is she expecting too much sitting still for this particular group? Is she trying to have organized activities at a time when they are either too energetic or too tired? Perhaps this is a very "up-and-down" group for whom planning must be very flexible, because they can handle half an hour of stories one day and only five minutes the next. She should also question whether the activities she has chosen are appropriate. For example, are the stories too difficult, too simple, or without plot?

It may also be that the teacher has not been paying sufficient attention to transitions--frequently the time when most problems occur. Does she give enough warning to the group that there will soon be a change in activity? Does she see that someone gives particular help to those children likely to have difficulty--either because of their personalities, because of some temporary stress, or because they are involved in a particularly messy or intriguing activity? Ways can also be provided of smoothing over difficult times:

1. Singing about each child as the children remove their boots and snowpants.
2. Finger plays while children wait for story time.
3. An interesting piece of conversation or an object in the pocket ready to bring out for a difficult moment.

While for the very young, disturbed, or other atypical group the teacher may have to limit routines to just a few minutes a day and to have several adults available for that time, usually such measures are not necessary. If the routines are brief, well organized, and attractive at the beginning, most of the children will accept them as just another part of school and will enjoy them. For example, the teacher avoids play which requires extensive cleanup such as Lego blocks or finger paint at the beginning of the year, has juice time organized so that everything is ready when the children come into the room, and plans short and very attractive stories. It is particularly helpful to have staggered entrances at the first of the year so that the teacher can give individual help in understanding routines.

Of particular importance in this whole area of limits and routines is to remember that a teacher's goals should be broader than just helping children to accept the rules which are necessary for the classroom to run smoothly. The teacher will want children to develop attitudes which lead to the acceptance of routines, not because they are forced or expected, but because they make sense. In order to achieve this goal, the teacher needs to be sure that children understand the reasons for any given rule, that as much as possible her reasons become their reasons, and that she does not ask them to accept rules which are petty or arbitrary. For example, one can expect that children will come to accept walking together on the way to the park if there are many driveways and streets to be crossed, since it is as much in their interest as the teacher's that no one be hit by a car. On the other hand, in many situations, lining up to go to the bathroom may make no sense at all.

The teacher can help children develop these attitudes of acceptance not only by explaining her reasons, but also by letting the children help to set rules, and by providing them with choices wherever possible. One might ask a group of four-year-olds, for example, to help with the problem of water and paint spilled in the bathroom, and as much as possible accept their suggestions for rules. In trying to enforce quiet in the nap room while some children are still asleep, one could give children the choice, individually, of putting shoes on in the nap room "without making the teeniest sound" or taking the shoes out into the hallway where silence is not so important. Over and over again one finds that problems with limits disappear when children are given some power in the situation, either to help make decisions or to choose between two alternatives.

Helping the Individual Child

For the child who still needs help after the general suggestions above have been tried, the teacher needs to look further for the source of difficulty. Sometimes, as with the group, only a simple change in routine is necessary. One child may be calmer all day if he has a brief time to himself on the trikes outside when he first arrives. Another may be able to enjoy story before juice, if the juice and crackers are not tantalizingly waiting on the table. Still another may be able to accomplish picking up if he is given more warning than the others. If modifying the environment does not work, the teacher must try various approaches with the child. To do this she must decide why the child is having difficulty with limits or routines.

The first hypothesis is that the child did not understand what is expected of him or has forgotten. While it may not be the most likely, this hypothesis is the easiest to deal with. It may also be a face-saving assumption for the occasional child who was really quite clear as to what he was doing, but after this initial testing is really ready to accept the limit. Thus the teacher may sit down to be at the child's level and say, "I think maybe you didn't hear when I told you that we don't run in the schoolroom because someone might get bumped and hurt." Often no more is needed to help the child accept this on future occasions than a look from across the room or a brief, "Remember--we walk."

The teacher's second hypothesis may be that the child is simply not able for one reason or another to do what she is asking him to do. Thus the teacher should ask herself, "Is what I am expecting of this child really possible for him at this time?" If not, and if the child is to remain in school, somehow the demands of the classroom must be modified. For example, the child whose attention span is so short that he cannot sit on a teacher's lap for a three-page story by himself is obviously unable to sit through a long story with a group. Probably he will not even be able to play quietly by himself without disturbing the group. He will need to be taken from the room for individual attention during this time.

A third hypothesis is that the child is reacting to something outside the immediate situation. He may not feel well, may be overly tired or hungry, or may be upset about something that happened at home. The teacher should ask herself whether he is behaving irritably toward other children as well as toward her, and look for signs of illness or emotional disturbance. Particularly when a child who has been reasonably cooperative in the past begins to push limits, the teacher will want to check out such possible causes.

A fourth hypothesis relates to the point which we made earlier, that children do best in relationship to limits when they have some power in the situation. Occasionally there is a child who for one reason or another has a strong need to assert that he is autonomous, to resist authority--not to cause trouble--but to prove to himself and others that he *can* do it. This is a very normal stage in the development of the 18-month- to two-year-old and again at adolescence, but a lot of fours feel this way too.

For such a child we try to avoid situations which threaten his autonomy, by making him responsible or by giving him a choice. For example, when it is time to leave the park, Rafael may run away if told simply; "It's time to go now"; but he might leave quite happily when asked to take care of two of the younger children on the way back, or if offered the alternative of either heading up the line or carrying the snack bag.

Only at the point of having considered and rejected these hypotheses does the teacher come back to what for many people is the first hypothesis--that the child is resisting routines precisely because he knows that it causes problems for her and because he either wants attention from her or wants to make her angry. A clue might be the child's expression, whether he seems to be watching the teacher closely and to be pleased at her reaction.

In the ideal setting with the perfect teacher this kind of motivation would present few problems in that it could be dealt with by seeing that the child got neither attention nor the satisfaction of seeing the teacher get angry from his actions. Theoretically this would result in gradual disappearance of the acts. In practice, much of this behavior must be stopped because it is hurting others or disrupting the group--and, let's face it--teachers are human, and they do get angry. However, the principle is still basically the same. Whatever behavior can be safely ignored is permitted; and the teacher concentrates on stopping that which cannot be ignored, with physical measures if necessary but as matter-of-factly as possible. "I'm sorry, but you can't run around the room while we're singing; it bothers the other children. You can sit down with us on the rug or you can color at the table." A refusal to do either means that the child must be removed from the room.

Once outside the room the teacher may have the difficult task of keeping the child from damaging her or the furniture until he calms down. She also needs to do it in as quiet and matter-of-fact a way as possible to avoid rewarding his attention-getting behavior or making him feel that she does not like him. However, many children will not become violent, and the role of the teacher is just to sit quietly and wait until the child seems ready to return. If handled correctly, taking a child out of the room will not need to be done often. However, it will not be effective unless the teacher and all the children understand that being taken out of the room *is not a punishment, but rather a practical measure taken because the group is being disturbed by this child's behavior.* This means that no child must *ever* be threatened with being taken from the room. Not only do such threats soon become ineffective; they also fail to help the child to begin to control his own behavior.

Limit testing can be extremely disturbing to the teacher. It often occurs at a time when she is least able to cope with it, and often she just does not know how to handle a given incident. Perhaps it is comforting to reflect that there are always times in any teacher's day when she does not quite know what to do next, and that in the long run one poorly handled incident is not going to be a disaster.

In the long run most children will come to accept limits most of the time if:

1. They are treated as responsible people who should have some voice in decision making.
2. Limits are reasonable and clearly stated.
3. All staff are consistent in setting and following through on limits.
4. When discipline is necessary the teacher is firm but calm and friendly--never punitive.

In case all of these conditions seem to be met and there is still one or more children with frequent and disruptive problems, the teacher will certainly wish to talk with the parents; and together they may decide to seek the opinion of a psychologist or psychiatrist.

The Overconforming Child

For the over-conforming child the teacher should reduce her requests or demands to a minimun and should give reassurance directed toward making the child feel more comfortable. For example, she may say explicitly, "It's almost time to pick up, but you have plenty of time to finish your puzzle," or after a spill or other accident, "It's all right; you were being careful and everyone spills sometimes."

The teacher will also want to help the overconforming child to express and admit to negative feelings (both in the area of routines and in relationships with others) by verbalizing what she thinks the child is feeling and by reassuring that this is all right. "I wonder if you're a little cross because we had to come in when you were having so much fun in the snow--most children feel that way when they have to stop playing." (Note that, as in all interpretation of feeling, the teacher doesn't tell the child how he feels--it's too easy to be mistaken. The "I wonder" leaves room for error.)

Activities Which Help Children Take Responsibility

Any activity which helps the child learn to do something for himself or others, from buttoning his own coat to helping another child pull a heavy wagon, can be used for making him feel good about taking responsibility (and serves as another way to help him feel competent). Any of the food activities can be used in this way, if the child sees the project as producing food for everyone and not just for himself. (For a complete list see the *Activity Index*.) The following activities are also good:

Large Motor- 8	Raking and Jumping in Leaves
LM-11	Outdoor Snow Play
LM-28	Cleaning the Playground
LM-30	Oiling Tricycles and Wagons
Art-39	Holiday Decorations
A-40	Gifts to Make
Language- 4	Making a Book
Science- 1	Plants in the Classroom

S- 6	Animals in the Classroom
S- 7	Observing Birds
S-10	Visiting Baby
S-13	Weather Report
Social Science- 1	Daily Classroom Cleaning
SS- 2	Window and Mirror Washing
SS- 3	Washing Dolls and Clothes
Music- 5	Finding the Note for Singing a Song
M- 7	Child Chosen Activity

9. INTERACTION WITH OTHER CHILDREN

Definitely needs help	Could use help	Adequate	Strength
Avoids other children most of the time.	Often rejects advances of others or plays more alone than with others.	Often initiates play with other children and usually accepts initiation from others.	Initiates cooperative play regularly.

Diagnosis

In many ways the diagnostic problems in this social-emotional area are very similar to those in the first area we looked at, initiation of activity. Again the child with no problems and the one with severe problems are easy to spot. It is the child who spends much of his time on the sidelines watching others with obvious interest or who is busy with activities, but usually alone, about whom the teacher will have questions. Does he need help because he would like to interact more, but doens't know how? Is he being rebuffed by an already established social structure in the group? Or is he a quiet observer whose personality pattern is such that he is self-sufficient, able to get satisfaction from his own activities--just naturally a loner? Again the teacher should try to observe the emotional tone of his behavior--happy or a little wistful? The teacher can also observe whether he is able to move into the group occasionally and whether he is accepted when he does so. A teacher will not want to try to impose a socially active pattern on any child. However, if he lacks the ability to interact with others when he wants or needs to, he is in need of help.

The other diagnostic problem in this area is the child who always seems to be with the group, but not of it. He does everything in a crowd; but on careful observation, one sees that he is never a real part of what is going on. There are many such children. To find them the teacher must be sure to observe social interaction in some detail. She must check whether the child is talking *with* others and playing an essential role, or is essentially playing by himself, ignored by those around him. Like the isolate, he may need help in developing some techniques for meaningful interaction with others.

General Suggestions for Helping Children to Interact with Others

One approach which the teacher may use with the child who seems anxious about moving toward groups of children is to provide some very nonthreatening experiences with others. The teacher can take the loner out of the group with one, two, or three quiet, accepting children who do not have strong relationships with each other, and can engage him in very attractive activities with them. Thus the child who needs help is given an easy situation in which to decide that it is safe to interact and to try out skills for doing so.

After several such sessions, the teacher may help the child move into a relatively accepting group within the classroom. She does *not* do this by asking, "Can Jimmy play with you?' a technique for which failure can almost be predicted. Rather she provides a needed role for Jimmy in the play. In doll corner play for example, she brings him in as the TV repairman who has brought back the TV set and wants to see if it works (cardboard box with one side cut out). She might also let the child bring some very attractive thing into the room and let him gather his own group, with careful watching to see that he is not overwhelmed. For example, he might introduce a new animal and be responsible for his care. Sometimes all that a very shy child can tolerate at first is to be given a role which brings him briefly into the group and an excuse to get out again if he likes. He can deliver the milk and leave again.

Another technique which helps is to provide some physical support in joining the group. The teacher or a volunteer and the child can both join a game. This requires, however, that the adult be very subtle in withdrawing from the situation slowly when she feels the child no longer needs active support. She might leave for a moment to do an errand and then return to check. Often a volunteer or student assigned to play this role becomes so involved with the child or the play that she does not recognize when it is time to move back; in this case the teacher will need to signal her to slowly withdraw. In some instances the support figure can be a mature child in the group or a participating older child. Here withdrawal is not so essential, so long as the shy child does not become dependent on the same child for help. However, even a temporary dependence may be a necessary step for the child with severe problems in this area.

When the child is to be involved in group activities such as games, it is important to start with activities which require little action and no verbal response. In lotto, for example, he should not be asked to name the card, only to point.

Experience tends to show us that none of these techniques work with the child who is abnormally anxious or who is preoccupied with some problem in his life at home. In these few cases the teacher can continue to make occasional testing efforts, but needs to concentrate her help on trying to make the child less tense through allowing a strong relationship with adults, helping the child express his feelings in artwork or solitary doll play, and trying to help the family work with the problem which is disturbing the child. In extreme situations the teacher may discuss with the family trying to get psychological help for the child.

Activities to Help Children to Interact with Others

Obviously any activity in which a child is interested can be used to increase interaction with others, if the teacher uses her imagination and "matchmaking" skills. The following activities are listed because they either require or strongly encourage active interaction among children. Also see *Social Science* or *Food Activities* (for a complete list see the *Activity Index*).

Large Motor- 8	Raking and Jumping in Leaves
LM-11	Outdoor Snow Play
LM-21	Bean-Bags
LM-22	Ball Play
LM-23	Frisbees
LM-24	Horseshoes or Quoits
LM-25	Bowling
LM-26	Basketball
LM-27	Group Games
Art-23	Mural Painting
A-29	Embroidery (Two-person Frame)
A-34	Tracing Around Children's Bodies
Table-26	Copying Game
T-29	Dominoes
T-30	Board Games
T-31	Box Die and Buttons
T-32	Dice and Washers
T-33	Playing Cards
T-34	Lotto
T-35	Bingo
Language- 6	Puppets
L-11	Telephone Talking
L-17	Using Megaphones
L-18	Whisper Tube Talking
L-30	Say-Something Game
L-33	Guess Who Said That

Books

Anglund, Joan Walsh; *A Friend Is Someone Who Likes You,*
Cowboy and His Friend
Buckley, Peer and Jones, Hortense; *Five Friends at School*
Cohen, Miriam; *Will I Have a Friend?*
Ets, Marie Hall; *Gilberto and the Wind, Play With Me*
Keats, Ezra Jack; *A Letter to Amy*
Mannheim, Grete; *The Two Friends*
Minarik, Else Holmelund; *Little Bear's Friend*
Morrow, Suzanne; *Inatuk's Friend*
Schick, Eleanor; *Making Friends*
Sutherland, Efua; *Playtime in Africa*
Udry, Janet; *Let's Be Enemies*
Zolotow, Charlotte; *Hold my Hand*

10. RESPECT FOR RIGHTS AND NEEDS OF SELF AND OTHERS

Definitely needs help	Could use help	Adequate	Strength
Completely unable to protect self, typically bosses others, frequently aggressive, or disrupts others in play.	Frequently unable to protect self, manipulates others (bossy) on occasion, or sometimes aggressive.	Respects rights of others; may hit to protect self, but not without reason.	Respects rights of others but protects own interests, usually verbally; can take both leader and follower roles.

Diagnosis

The child who takes things from others and who is physically aggressive towards them, and the child whose sole reaction to any threat of aggression is to scream for the teacher, or just to scream, are only too evident in any classroom. Those for whom more careful observation is necessary before their need for help becomes obvious are the children who are more subtly aggressive (teasing, name-calling, threatening to withdraw their friendship) and the children who give up their possessions without a murmur or react to threats of aggression by withdrawal. The teacher needs to be on the lookout for such cases and should note them as equally in need of help.

General Suggestions for Teaching Respect for Rights of Self and Others

Teaching an Attitude of Concern

Helping children to respect the rights of others involves far more than just teaching them not to grab toys away from other children or not to hit, bite, or scratch. Much more basic is the development of a concern for others and a sensitivity to how they feel. With some three-year-olds one must start almost at the beginning in teaching this kind of positive attitude, because many young children are normally very egocentric and quite unable to put themselves in the place of others.

The teacher may begin by the showing of such concern herself, by interpreting to children the needs of others, and by reinforcing thoughtful acts. Thus, she might show her own concern by telling children that she is sorry when they are hurt or unhappy. (She needs, of course, to do this in such a way that all the children can see that she is sincere, but not to overdo it.)

Interpreting needs to other children might include such things as asking an onlooker to get a kleenex for a crying child, to go ask the cook for ice for a bumped head, or asking a more capable child to help another with boots or mittens or with a heavy board. In all cases these requests should be made matter-of-factly so that the child who does not want to be of help in the particular situation does not feel guilty or disapproved of if he does not respond. Reinforcement of a helpful act also should be done in terms of the usefulness or kindness of the act itself, rather than by telling the child who did it that he is a good boy. We hope to bring children eventually to being genuinely concerned for others, not just being anxious for the teacher's approval. For example, a child who had brought a kleenex to a crying friend might be told, "Thank you, he needed that."

Helping others need not be limited just to situations where a child is hurt or unhappy. Having children take such responsibilities as passing crackers or seeing that everyone has a napkin can also teach them to begin to be aware of the needs of others. Setting up projects requiring cooperation can teach the essential idea that helping can be a two-way relationship.

Teaching Children to Cope with Conflict

Beyond working on this basic attitude toward people, the teacher must, of course, help children to learn how to act when there is a conflict of needs or interests--teaching the aggressive child greater respect for others and the submissive child how to protect his own rights. The techniques for dealing with both kinds of problems are interwoven rather than separate, since the most effective teaching can be done in the immediate conflict situation which often involves one child who is the aggressor and one the victim. (Of course, it may also involve two aggressive children, in which case it is always profitless to try to define which is the aggressor and which the victim, though teachers often waste a great deal of time trying to "place the blame.") In either case the teacher tries to make a clear statement of the situation leading to the problem in terms which clarify to both children the reasons for the action of the other. For example, "Keesha, I think you pulled Carol's hair because you want to get in the doll bed; but Carol likes the doll bed; and she wants to stay there." Or "John, you really want that car very badly, but Jay hit you because he needs it too."

For fairly mature children, the teacher may then ask the children for help in resolving the problem. "You both want the car now. What can you do about it?" Children are often much readier to think about and discuss these problems than adults realize, especially if the teacher has set up the expectation that children will be concerned and responsible toward each other. Sometimes a problem common to the group can be discussed with the total group and some solution worked out between teacher and children.

However, for younger children or those who are not used to being asked to think about conflict in terms of resolution the teacher will have to begin by suggesting a possible solution or sometimes a choice between two. In the situations described above the teacher might say, "We could push the big doll buggy next to the bed, and Keesha and Carol can be babies together"; or "Jay, you could tell John that you need the truck now, but that you will save it for him when you finish."

Obviously talking like this depends on having two reasonably calm children who are ready to listen. In many cases, the teacher must take some more direct action before she can get to this stage. Often this involves physically restraining the aggressor and when he is able to listen, saying, "It hurts Jay when you hit him." At the very beginning of the year she may not try to go further, but rather deal with the problem in a very concrete way, finding another truck or diverting one or both to another activity.

The tendency of some adults to handle an aggressive scene by concentrating on comforting the victim and incidentally punishing or trying to make the aggressor feel guilty is putting things the wrong way around educationally. It only teaches the victim that not being able to solve your own problems brings you attention and comfort, and the aggressor that he is a bad and unloved person. The constant victim has to learn ways of avoiding the victim role since teacher or mother is not always going to be there to help and protect. The highly aggressive child needs to learn that he is liked in spite of his hostile feelings, and even that the feelings are accepted, but that a strong, dependable adult is not going to permit him to express them by hurting others.

The same thing is true when aggression is verbal rather than physical. The teacher may sometimes want to ignore threats or angry words since movement from hitting to talking is a step toward maturity. At some point, however, she will want to teach children that words can hurt too and in some instances to protect children from being attacked in this way. Thus, if a child frequently says with intent to hurt or in an attempt to manipulate another, "I don't like you; I'm not going to be your friend," the teacher should feel just as free to say to him, "That makes Sandy feel sad and I can't let you say it to him" as to tell him "I won't let you hit other people." She can remove the child from the group to enforce the prohibition if absolutely necessary.

Similarly the teacher should be alert to hurtful behavior toward other children which appears in the guise of dramatic play--"dogs" who bite, "bulls" who knock other children down with their heads, "monsters" who frighten others. She also needs to work with the child who "accidentally" hurts others or arranges accidents, by letting him know that this kind of behavior is not acceptable either.

In whatever form the aggression has appeared, however, the teacher should always keep in mind that her educational role is less than half done if she only stops the aggressive behavior. As pointed out earlier, she must also, by example or discussion, show a more productive way of resolving the problem.

Activities for Teaching Rights of Self and Others

We have not listed here any specific activities because those listed under *Responsibility* in the section on limits and routines and those under *Sharing and Taking Turns* are also applicable here. Otherwise the teacher will ordinarily use the opportunities for teaching which arise spontaneously, rather than setting up situations.

Books

DeRegniers, Beatrice Schenk; *A Little House of Your Own*
Flack, Marjorie; *Angus and the Cat*
Hoban, Russell; *Bedtime for Frances, Bread and Jam for Frances,*
    A Baby Sister for Frances, and
    A Birthday for Frances
Phoebe; *Noses Are for Roses* (Out of print; try library.)
Scott, Ann Herbert; *Sam*
Yashima, Taro; *Crow Boy*

11. SHARING AND TAKING TURNS

Definitely needs help	Could use help	Adequate	Strength
Never shares. Always tries to be first.	Rarely willing to share. Can wait only briefly for turn.	Usually willing to share if has enough. Will take turns.	Is inventive in solving problems related to sharing or play material.

Diagnosis

In many nursery schools at the beginning of the school year there may be few opportunities to assess whether children are able to share and take turns, since activities requiring such social skills are not a usual part of the program. The teacher may therefore want to set up some situations in order to observe individual children's reactions. Almost any simple table game such as lotto or an especially attractive obstacle course can be used to check children's understanding of the process of taking turns. Sharing may be checked by having just enough crackers for each child to have one at juice or by having two children share a dish of paste or a can of paint.

Of course willingness to share or take turns is not an all-or-none characteristic. A child may be willing to share paste but not crackers, take turns on the slide but not for handwashing, on Monday when he feels happy, but not on Tuesday when he is tired. All that we need to do in diagnosis is to find those children who frequently have problems. A simple friendly reminder will serve for the child who usually remembers. (Or if it's a bad day for him, just ignore it.)

General Suggestions for Helping Children Learn to Share and Take Turns

As was pointed out in the routines section, we often seem to feel that skills like sharing and taking turns have some kind of moral quality to them--as though they were things that children should just "naturally" do. In fact most three-year-olds have little or no concept of what is meant when someone says, "You have to share" or "You have to take turns"; and even four-year-olds often have problems with doing so. Moreover, learning to take turns and share requires not only an understanding of the concepts, but also the necessary attention span and frustration tolerance to wait or to give up something.

Thus, the teacher must work first with basic attitudes and understandings before she concerns herself with specific instances of sharing and taking turns. In fact, the feeling of responsibility and concern for others, described in the previous section on respect for others' rights, is also fundamental to these abilities.

Also basic to being able to think about other people's needs is a feeling of security and comfort which comes from having one's own needs met over a period of time. It is unrealistic to expect a child who has few things of his own at home and who is confronted at school with many desirable objects and exciting things to do to accept the value of sharing and taking turns. The teacher needs to let him have some things which he will not be asked to let anyone else use--a cubby or other place to keep things that he makes, perhaps a box of crayons with his name on it, a plaything that he brings from home. At the beginning the teacher should try to avoid placing such a child in situations where sharing or taking turns may be difficult.

While the teacher cannot always give him exclusive use of all the things that he is interested in, she can express the need for division of use in some reasonable and acceptable way and try to avoid saying "We have to share" or "We have to take turns." Thus, she might simply say, "Bill will be next on the jumping board when Evan has finished. Evan, please tell Bill when you are finished." (And if Evan seems unlikely to decide that he is finished, she might add "Evan has three more jumps and one big high one off the board--One, two, three, and a *big high one.*") Occasionally a timer can be used, or for older children, the passage of the big hand on the clock from one to two.

Such techniques also can be used with children who do not ordinarily have problems in this area, when there is some unusually attractive new toy or activity. Sometimes if the teacher feels that the whole group needs some help in this area, a series of activities can be introduced so that the structure of the play requires taking turns. Examples of this kind of play might be a one-way obstacle course, making a cake where each child gets to beat the batter a certain number of strokes, and telling a story where each child gets to make the noise of a certain animal at an appropriate point.

Remember particularly that children are much more likely to be mature in social situations if the activity is an enjoyable one and if they have some control over it. The goal which the teacher is working toward is to have the children themselves find ways of dividing up scarce materials or limited activities so that everyone is happy with the results.

Activities Providing Opportunities for Sharing and Taking Turns

As noted above, almost all food activities give many opportunities for both sharing and taking turns. (For a complete list see the *Activity Index*.)

Large Motor- 1	Obstacle Course
LM- 2	Balance Beam
LM- 3	Seesaw
LM- 4	Walk on the Lines
LM-13	Stunt Mat
LM-17	Jumping Rope
LM-19	Rope or Tire Swinging
LM-21	Bean-Bags
LM-22	Ball Play
LM-24	Horseshoes
LM-25	Bowling
LM-26	Basketball
LM-27	Group Games
Table-26	Copying Game
T-29	Dominoes

T-30	Board Games
T-31	Box Die and Buttons
T-32	Dice and Washers
T-33	Playing Cards
T-34	Lotto
Science- 6	Animals in the Classroom
S-24	Magnifying Glass
Miscellaneous- 7	Timer
Misc- 8	Counting for a Turn

12. FEELINGS ABOUT SELF

Definitely needs help	Could use help	Adequate	Strength
Frequently has doubts or is negative about himself and the way others feel about him, often says he can do something he cannot, or refuses to try something he can do.	Seems somewhat unsure of own worth and acceptance by others, or is somewhat unrealistic about own abilities.	Has positive feelings about himself and believes that other people like him. Realistically evaluates his strengths and weaknesses.	

Diagnosis

Many teachers feel that their first concern for a child should be to help him to see himself as a worthwhile person and to understand himself. At the same time they recognize that this is one of the most difficult areas for diagnosis. In many cases the Social-Emotional Checklist will be otherwise completely filled out while a question mark or a series of questions remains in this space.

It usually takes time to get to know a child well enough to determine how well he "likes himself." Occasionally we will find a child who says, "I never do anything right" or "Nobody likes me"; but young children are not often this verbal. Rather we have to depend often on subtle clues and intuition. A child may express doubts about himself by:

1. Belittling or destroying the things that he does.
2. Attacking other children who he feels threaten him.
3. Clinging to the teacher for support (literally and/or figuratively).

4. Trying desperately to impress people with the things that he can do or the things that he has.
5. Or in a host of other ways showing that he feels anxious and insecure about his own ability to cope with the world or about the way that others in his world feel about him.

On the other hand the child who has been rated as adequate or having unusual strengths in most of the areas on the Social-Emotional Checklist is likely to be a child who feels reasonably comfortable with himself.

General Suggestions for Helping Children to Feel Positive About Themselves

Fortunately there is no necessity to place a child exactly on this scale early in the year. Because it is such a very basic area, it may be simplest to assume that most children need to feel more adequate and that the children who need it the most will show it with time.

Such a hypothesis is more economical than it sounds, in that the majority of the things which we would do to help a child with his self-concept will also serve other purposes. Nothing is more effective in making a child *feel* adequate than helping him to *be* adequate. When we teach him to solve a problem on his own, to catch a ball better, to make a new friend, or to count objects up to ten, we are adding to his picture of himself as a person who *can do* things, and do them *well*.

We also help the child's self-concept when we give him a chance to see himself as a person who can handle problems. Thus a child who has spilled his milk can be expected to clean it up, but whether the experience adds to his concept of himself as a careless child with whom the teacher is often annoyed, or as a child who has had an accident but is considered capable of coping with it, will depend on how the teacher handles the situation.

The teacher should also be alert to understand the particular things which make a child feel good about himself. For one child it may be singing about her new dress while for another it may be a smile and a hug. Perhaps one of the most important things for a teacher to do if she wants to make a child feel valued is to remember to think of him as an individual--to try if she possibly can to greet him personally every morning and to have some special contact with him during the school session, even if it is only a quick comment on a painting he is doing or a special smile to him across the room when he has done something to be proud of. When we praise him for something he has done, give him a hug, or admire his new sweater, we are not only strengthening our relationship with him but we are also helping him to see himself as a *likeable* person.

A Realistic Self-Concept

While helping the child to have positive feelings about himself is the most essential part of developing the self-concept, we should not forget the importance of helping him to structure a realistic picture of himself. Some children need to be started very simply by getting to know themselves in a physical sense. This means teaching the names of the parts of the body, being sure that the child knows his whole name and where he lives, and talking about his family members and his house. We can also let him become more aware of himself through looking in mirrors, listening to his voice on a tape, or seeing still or moving pictures of himself. This is particularly good if he can see himself in situations where he is happy, achieving, or conquering a fear, such as playing with a favorite friend, climbing the jungle gym, or sitting in the dentist chair.

The development of realistic self-appraisal of his own abilities begins when the child finds that he cannot do something. Here the teacher plays the role of clarifying the reason for the failure and helping the child to accept it. Thus if a child is trying to do something which he should be able to do with practice, the teacher might say, "That puzzle is pretty hard for you now; but I think if you keep trying, one of these days you'll be able to work it." If the problem is one of maturing, the teacher will point out when the child will be able to accomplish his goal, saying, "You'd like to be able to reach that branch without standing on a block, but you're not quite tall enough. Maybe by next year you'll grow enough to stretch up to it." When the goal is an impossible one for anyone, this too should be clarified: "Yes, I've often wished I could fly too; but people can't fly by themselves, only with airplanes. But maybe if you run down the hill very fast and jump into that pile of leaves it might feel like flying."

The special case of the child who cannot do something which everyone else can do needs to be handled with care and sensitivity, but with the same degree of realism. "I'm sorry that you can't run with the other children. It's really hard when you want to so much. Would you like to stand at the end and be the man who tells them when to start?" The other side of helping a handicapped child with self-concept, of course, is working particularly hard to help him to achieve as much competence as possible in every area, so that he has much that he can do and feel proud of.

Activities for Helping a Child Feel Positive About Himself

As noted above, *any* activity which makes a child feel proud and competent can be used in the area of self-concept. All the activities listed under *Responsibility* in the section on limits and routines are particularly good for this purpose. Below are listed specific activities which help a child to look at and understand himself, either in the physical or the psychological sense.

Art-32	A Room of Your Own
A-34	Tracing Around Children's Bodies
A-36	Footprints and Handprints
Table- 2	Name and Word Puzzles
Language- 3	Child's Own Book
L-10	Tape Recorder
L-14	Mirrors

L-15	Movable Man
L-29	Show and Tell
Science- 9	Measuring Children's Heights and Weights
S-11	Baby Pictures
S-12	Functions of the Body
Social Science- 2	Window or Mirror Washing
SS- 7	A House of Your Own
Food- 4	Birthday Celebration
F-10	Foreign Foods (for foreign child)
Music- 7	Child Chosen Activity
M- 8	Singing About a Child
Miscellaneous- 3	Still Photography
Misc- 4	Movies

Books

Anglund, Joan Walsh; *A Friend Is Someone Who Likes You*
Bright, Robert; *I Like Red*
Brown, Margaret Wise; *The Runaway Bunny*
Green, Mary McBurney; *Is It Hard? Is It Easy?*
Hoban, Russell; *Bedtime for Frances, Bread and Jam for Frances, A Baby Sister for Frances,* and *A Birthday for Frances*
Krasilovsky, Phyllis; *The Very Little Girl* and *the Very Little Boy*
Krauss, Ruth and Johnson, Crockett; *Is This You?*
Krauss, Ruth; *The Growing Story*
McCloskey, Robert; *One Morning in Maine*
McGovern, Ann; *Black is Beautiful*

Activities of Help with Feelings of Fear and Anxiety

One social-emotional area for which we would like to list some activities and useful books is not included in the Social-Emotional Checklist since it is not so much a question of development as of temporary problems which may arise. This is the handling of feelings of fear, anxiety, or jealousy. (A number of the books listed seek to help with general feelings of insecurity.)

Science- 6	Animals in the Classroom
Art-31	Nighttime Pictures
Social Science- 7	A House of Your Own
SS-18	Doctor, Office and Hospital

Books

Brown, Margaret Wise; *The Little Fur Family, Goodnight Moon,*
The Runaway Bunny
Carton, Lonie; *Mommies*
Copeland, Helen; *Meet Miki Takino*
DeRegniers, Beatrice Schenk; *A Little House of Your Own*
Ets, Marie Hall; *Gilberto and the Wind* (Friends)
Play with Me
Fisher, Aileen; *In the Middle of the Night*
Flack, Marjorie; *Angus Lost*
Gill, Joan; *Hush, Jon* (Jealousy)
Ilsey, Velma; *M Is for Moving*
Ipcar, Dahlov; *The Cat at Night*
Iwasaki, Chihiro; *Staying Home Alone on a Rainy Day*
Keats, Ezra Jack; *Peter's Chair* (Jealousy)
Leaf, Munro; *The Story of Ferdinand*
Lindgren, Astrid; *Of Course Polly Can Ride a Bike*
MacDonald, Golden; *Red Light, Green Light*
Marino, Dorothy; *Goodbye, Thunderstorm*
Morrow, Suzanne; *Inatuk's Friend* (Moving)
Ressner, Philip; *At Night*
Williams, Gweneira; *Timid Timothy*
Zolotow, Charlotte; *The Sky Was Blue*

Chapter 7
The Individual Testing Session

INDIVIDUAL TESTING SESSION

Introduction

Since the publication of the first edition of *School Before Six*, experience with the group concept games included in Chapter 8 has shown that many teachers find it difficult to note exactly where each child in the group stands on each concept. We were aware of this problem before publication, but we felt that the games would give the teacher a tool by which she could:

1. Determine the general level of the group.
2. Pick up those children who were most in need of help.
3. Find those children who were ready for more advanced activities in the area.

However, we have found that many teachers, especially in kindergarten, want more precise knowledge of where each child stands in certain crucial areas. These crucial areas are usually colors, numbers, and body parts. In addition we have come to feel that in the critical developmental areas of form perception, reproduction, and sorting, it is also important to take a more careful look at the individual than is usually possible in a small group.

For this reason we have set up a series of tasks which can easily be given by a teacher to an individual child in a fifteen- to twenty-minute session. Presenting these tasks requires no background in psychological testing, only experience in working with young children in a one-to-one situation and a small amount of practice with the materials and the instructions so that the testing can flow smoothly. Space is provided for recording results of the individual testing session on page two of the Needs and Plans Sheets. (See *Needs and Plans Sheets, sample.*)

General Suggestions for the Individual Testing Sessions

As with all parts of the Diagnostic Approach, remember that the use of these tests is flexible. If the teacher wants to use one or two parts as individual tasks and feels that the others are not so important, she may want to handle them in small groups instead. For example, she might not want to know exactly what each child knows about body parts, and might omit this. In some cases, she might be interested in knowing more about some other area, for example, memory, and might want to modify the group concept game on memory or make up her own game to use with individual children.

The one exception to this flexibility is in the case of the copying of forms. While it is not necessary to take each child out of the room for this task, if it is the only task being given, we have found that the teacher needs to concentrate on only one child at a time in order to get adequate information about the child's perceptual-motor functioning.

As noted earlier, scheduling of the tests will depend on the individual situation. Some teachers may prefer to have one child come in early each morning until they have gone through the total group. Others might take children from the group during free play time, testing two or three each morning. The testing session for any given child could be divided into two parts if necessary, though this is less efficient.

The important points to be remembered in the individual testing situations are:

1. The session is best given in a room where there are no other children and as few distractions as possible. However, the classroom can be used if no other children are there.
2. It should be at a time when the child feels well and is interested. If he seems sleepy, tired, or bored, put off the session.
3. Make the games fun and keep the pace moving rapidly. (Most children really enjoy the session if the teacher feels comfortable and keeps the games going.)
4. Note everything of importance before going on to the next child. Many times the child's behavior in the session will give new insights into social-emotional areas like attention span or into things which interest and motivate him.
5. As with all tasks, *remember that the child's self-concept is of primary importance. Do not allow any of the games to become failure experiences.* (See *Failure Experiences, Avoiding.*)

THE TESTING SESSION

Counting

Objects counted______ Rote counting______

Materials

Make three identical cards 1" x 4" (approximately) with five pennies glued in an evenly spaced row on each one.

Procedure

In this task the teacher can determine not just how far the child can count by rote, but also how well he can count objects. Put out one card and ask him to count the pennies. If he counts without pointing and is incorrect, tell him, "Try it again, and this time put your finger on the pennies." If he counts incorrectly, say, "Let's try it once more," and write down what he has said; for example, "1, 2, 3, 6." If the child counts correctly up to five, add another card and say, "Now let's count the pennies on both cards." Again note how far he counts correctly. (Many children will count by rote correctly, but count one penny twice or miss one. In this case make a slash at the point at which the child made an error; for example, "1, 2, 3, 4, 5, 6, 7/, 8, 9, 10, 11." Here he came out at eleven because he counted one penny twice.) If he counts to ten, add the third card. If he counts 15 correctly, ask him to show you how far he can count without counting pennies, and note this. (If a child can count 15 pennies correctly, he will probably be able to count objects as far as he can count by rote.)

Body Parts

Eye_____ Ear_____ Nose_____ Mouth_____ Arm_____ Hand_____

Fingers_____ Leg_____ Foot_____ Toes_____ Elbow_____

Wrist_____ Shoulder_____ Ankle_____ Cheek_____

Materials

A medium-sized composition or plastic doll, dressed in underwear or a short sleeved dress, is optional. We used a doll for the first part of this task because it seems to interest some children who are a little hesitant about naming body parts on themselves or the teacher. Verbal, outgoing children may not need it.

Procedure

Point to the doll's eye or your own eye and say, "What do you call this?" If the child says, "Eyelash" or "Lid" or any other part of the eye, note this; if "eye," record "N" (for "names"). Follow with the ear, nose, mouth, arm, hand, fingers, leg, foot, and toes. Record an "N" in the box for each body part the child is able to name.

When the teacher is asking for a smaller part of the body, a child will often give the name of a larger portion, for example, saying "foot" when the teacher is pointing to toes. In this case the teacher says (pointing first to the whole foot and then to the toes), "Yes, this whole thing is the foot; but what do we call these?"

If the child has given a correct answer to at least five of the first list, the teacher goes on to elbow, wrist, shoulder, ankle, and cheek, but points to these on herself rather than on the doll (bending her elbow to make a point). Then the teacher will go back to the items that the child has named incorrectly or refused and say, "Now we'll play it a different way; can you show me your...?" (Return to the doll if the child seems to prefer using it.) Place an "R" after all those body parts which the child recognizes (can point to).

Sorting and Matching

Forms matched_____ Pictures sorted_____

Materials

The materials for the matching task are the same as those used for the group concept game on two-dimensional form included in Chapter 4. Make two copies of the sheet containing forms supplied there. (See *Matching Forms* for the sheet.) Mount on cardboard; cut one sheet into strips and the other into individual cards. (Only the strip marked "individual" and five matching cards are used for the individual test.)

For the sorting task buy two books of stickers, one of flowers and one of animals (available at most stationery stores) or cut out pictures of four different flowers and four different animals. Stick or glue on eight small cards. Get two small box lids or other shallow receptacles.

Procedure for Matching Forms

Place the strip of forms in front of the child and hand him one card at a time, saying, "Put this on top of the one that is just the same." If he makes a mistake, do not call his attention to the error, but say at the end, "Let's try it once more; look very, very carefully this time." Note in the box the number of forms correctly placed.

Procedure for Sorting Pictures

Spread the eight flower and animal cards out in front of the child in random order and say, "Now can you put the ones together that go together? Put one pile in this box and the other pile in this box." When the child has finished, ask him, "Why do these go together?" pointing to one box and then, "And why do these go together?" pointing to the other. If he does not understand or reply, ask, "How are these alike?" Write down his answers.

Colors

Red_____ Blue_____ Yellow_____ Orange_____

Green_____ Purple_____ Black_____ White_____

Gray_____ Brown_____ Tan_____ Pink_____

Materials

Cut out two one-inch squares of paper in each of the colors listed above. Choose clear, pure colors. Glue the first six squares (red through purple) on one strip of cardboard 2" x 8" and the second set of six (black through pink) on another strip. Put the duplicate squares into two envelopes.

Procedure for Naming

In this task the teacher tries first to see if the child can name the colors, first on one strip and then on the other. Ask, "Can you tell me the name of this color?" Whatever the child's response, correct or incorrect, smile and go on to the next. When a color is named correctly, put an "N" in the box; otherwise leave it blank. Most children will either give a correct or incorrect response or say, "I don't know" without much concern; but if a child seems upset, say, "This is a pretty hard game; let's play it another way," and go on to the second part. If a child names only one or none of the first six colors, do not ask the second six.

Procedure for Recognizing

Try to see if the child can recognize the *colors he did not name*, asking him, for example, "Can you put your finger on the red one?" Ask this only for the colors he missed before, unless he seems eager to go through the whole card. Place an "R" in the box for those he recognizes.

Procedure for Matching

If there are more than three colors of the six which he has not recognized, hand him the loose one-inch squares one at a time and say, "Can you put this on top of the one that is just the same?" Do not repeat the directions for each square unless he seems confused. If there is time, let the child match colors even if he has done well on recognizing, just because children enjoy this activity so much and feel successful when they have accomplished it. If a child is not matching correctly, observe very carefully to see whether he seems to understand the task and seems to be trying or whether he is just trying to get through in a hurry.

Copying Forms

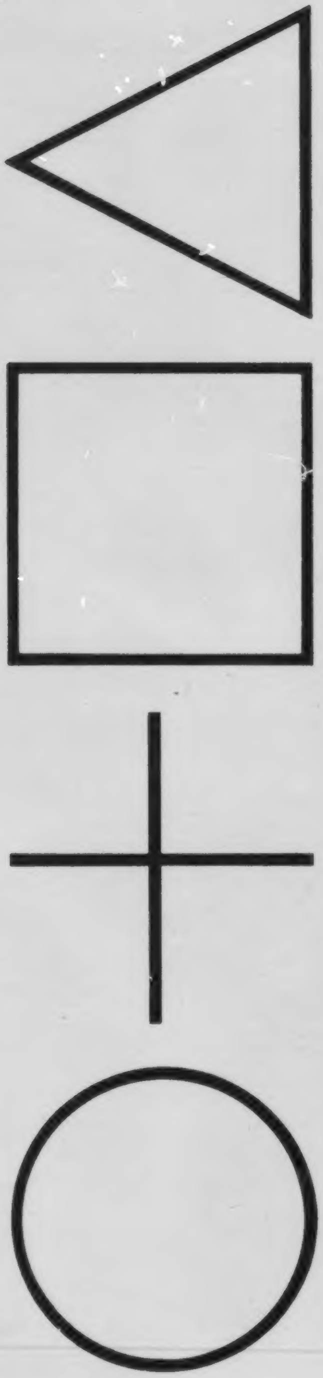
Circle	Cross	Square	Triangle	Diamond
______	______	______	______	______

Materials

The materials needed for this task include well sharpened pencils or magic markers and sheets of 8 1/2" x 11" paper with a circle, square, cross, and triangle at the top. (A sample is included below which may be removed from the book and copied.) Kindergarten teachers may want to make up their own sheets, adding a diamond shape.

Procedure

Give the child a sheet of forms and explain the directions before handing him the pencil or magic marker. Say, pointing to



Forms for copying task in individual testing session the circle on the child's paper, "This is a drawing game. Draw another circle just like this." Then, pointing to the space just below, say, "Draw it here." If any of the children are unable to draw an adequate circle, suggest, "Let's draw another one right down here." Repeat with the other figures.

If the child makes his figures so large that there is not room for all the figures or for copying a second time, lay a blank sheet of paper on top of the first sheet, leaving the forms to be copied exposed at the top. Hold it for the child so that it does not slip.

If the child simply scribbles when asked to draw a circle, do not ask him to copy the rest of the forms. If he is completely unable to do any form on two tries and seems uninterested or upset, do not ask him to copy the next one. However, if he is happy and cooperative, it is often useful to see how he approaches the more difficult forms.

Diagnosis and suggestions for teaching. As noted earlier, the purpose of having these items grouped in an individual testing session is to permit the teacher to get a better idea of just how much each child knows. Since each item may, if necessary , be tested in a small group session, the details of diagnosis and teaching are discussed under the corresponding concept games in Chapter 8 and under the concept game on matching forms included in Chapter 4. (See *Copying Forms; Color; Number; Body Parts; Matching , Forms; Classifying, General Suggestions for Teaching;* and, where appropriate, *Diagnosis.*)

Chapter 8

Diagnosis and Teaching in the Cognitive Area

In this chapter we discuss diagnosis and teaching in 39 different cognitive areas. For each there are included:

1. A game designed for diagnosis and/or as an introduction to the area.
2. General suggestions for teaching.
3. Specific suggestions for teaching (references to activities or books described later in the manual).

As with previous areas the suggestions for teaching can be used whether or not the diagnostic tasks are used. However, it is always desirable for a teacher to use at least an informal diagnostic session, so that her teaching for any particular concept will be at an appropriate level. For example, before a unit on plants she might bring a potato plant, roots, potatoes and all into the classroom and listen to the children as they talk about it; or before beginning work on measurement, she might put out yardsticks, rulers, and tape measures to see what the children already know.

Types of Concepts Included

Three general types of concept areas are covered in this chapter. Within each type many other areas could obviously have been covered. Those chosen were included because they seemed to be most appropriate to children of preschool or kindergarten age in our culture.

Cognitive skills. These include tests which measure abilities such as memory, rather than concepts. However, because they are related to cognitive development and use games identical in format to those used to test concepts, they are included in this chapter.

Qualitative and quantitative concepts. These include concepts related to physical characteristics of the environment, for example, color and size.

Informational concepts. These concept games test children's knowledge about the names and functioning of people and things in the world around them, for example, community workers and machines.

General Suggestions for Games

Effective use of the concept games depends on using them with small groups of from four to eight children (the ideal seems to be about five) at a time when children are likely to be alert and interested, and in a place where they will not be bothered by others. The latter is almost impossible to achieve in the classroom during free play time. Therefore it seems best either to have all children in small groups at the same time with each teacher taking a group, or to have a nearby room where one teacher can take each group in turn while the other teacher or teachers supervise free play. The first alternative depends on having a class of children all of whom are reasonably cooperative or an extra person to keep an eye on those children who are not yet ready to participate in a group. The extra staff member may not be a serious problem since group time would usually be only ten to twenty minutes per day during which the director, the secretary, or an aide from another room might help out. Duplication of materials is not a problem since concept games would not be used every day. One group could use the game materials one day, and another the next; or a child might take the materials to the next group when one group was finished with them.

Below we discuss some things to keep in mind while playing concept games.

Avoid Failure Experiences.

The most important caution relates to success or failure feelings on the part of the children. Avoiding feelings of failure is absolutely essential if the children are to gain in self-respect and self-understanding as they learn concepts.

First, stress the fun and learning aspects of the game. Even though the teacher herself is going to be interested in what the children know, this should never be a concern for them.

We need a new kind of vocabulary from that which is usually used in working with children in testing or learning situations. Our examiners found that they had to work hard to avoid a vocabulary which focused on right and wrong, on whether the child was succeeding or failing. For example, we learned not to say, "That's right," "That's wrong," "Good," or "Not so good." Rather, by focusing on the actual response, we were able to focus the child's attention there also. We would say, for example, "Yes, you do have a square," instead of "That's right"; or if the child had made a mistake, we would say, "No, that one isn't a square; why don't you try again?"

We found that by using such an approach and making the games fun for everyone, the children did not seem to mind when they were unable to answer. On the rare occasions when a child seemed to be concerned, we helped by saying, "That was a very hard one; let's try this one." Then we would provide an easy success experience. If other children say, "That's wrong," they should be reminded that it is their turn to listen now.

The Child Is Not Required to Join the Group.

Participation in the games is like all of the routines--expected but not forced. That is, the expectation is that each child will eventually want to play the games and will enjoy them, just as each child is expected eventually to want to go outdoors. However, for the child who is reluctant to join in at the beginning, or the child who has more serious problems and is very resistant to joining in these routines, the approach should be "You can try it a little later." He should be encouraged to sit and watch to see what the other children do, both because he may suddenly decide to join and also because he will learn from watching. However, if the child is not willing to do this, he can be given some quiet activities nearby. It is, of course, very difficult to involve the children in these games on a regular basis if the alternative is active play. This is also disturbing to the children who are taking part in the games. Actually, our experience has been that with most children there are very few problems of this sort. Most of the games seem to be very attractive and if one starts out at the beginning of the year with those which are most interesting to the teacher and to the children, it is a rare child who does not want to become immediately involved.

The Time Spent on Games Should be Limited.

It is very important not to expect the children to stay too long in the small group. At the beginning of the year, especially with the very young group, it may be necessary to play for only a very few minutes, gradually lengthening the time that the children spend but always stopping before the point when they become bored or disinterested. The teacher will very soon learn the cues which show that she is beginning to lose the interest of her group, and it is always important to terminate the games before the children say that they want to leave. The exception to this would be when one child has a much shorter attention span than the others; very often it is possible to keep such a child involved by calling on him or drawing his attention to something especially attractive. In general, it is probably better not to let one child go and then to continue with the others; but this may occasionally be necessary.

Limit the Number of Times the Same Game Is Played.

Remember that the primary purpose of these games is for the teacher to find out how much the children in the group know. If at the beginning the total group is found to be very familiar with the concept being presented, there is no point to playing the game again unless the children are enjoying it and request it. In some cases, the teacher may innovate by changing the game to make it more difficult, adding more concepts or in some way advancing the level to make it appropriate for the children to continue playing. The children themselves often have such ideas.

If the children do not know many of the concepts, the game can be used for teaching purposes to the point where they begin to lose interest. *However, the teacher should always keep in mind that the game is not intended as the primary way of teaching whatever concept it is that she is working with, and that it must always be supplemented by a selection of activities from the activities section, which have been keyed to the concept, or by appropriate activities devised by the teacher.*

Know the Game Before Playing It.

The teacher should be aware of exactly what she will be doing with the games before she starts using them with the children. In order for the games to be at all successful, she must have practiced them ahead of time; and she must be sure that her materials will work, that she is thoroughly familiar with the directions, and that she feels comfortable with what she is going to do. It is a very exceptional teacher who is able to hold the attention of a group, to find out what they know about concepts, and at the same time to read from the direction sheet. As far as the directions go, we do not suggest that the teacher should use our exact words. Very often they may not be her way of saying things.

Another caution to make the whole process run smoothly is to be sure that the materials are in order and in a place where the teacher can reach them easily. Sometimes, particularly with very immature children who find it difficult to keep their hands off the materials until they are passed out to them, it is good to have the materials in a box on the floor beside the teacher or on a little table behind the teacher. Sometimes the materials are such that they can be put in her lap. However, the table on which the children are to work should not be cluttered.

Decide on a Procedure for Children's Responses.

Some of the cooperating teachers have said that they had considerable difficulty with children who always wanted to be first or who always gave answers whether they were called on or not. This can be disruptive to the group and can make it impossible to find out how much each child knows. Therefore, we suggest that the teacher first run some preliminary sessions, using any simple attractive activities, to see whether this problem exists with her particular group; and if it does, she will need to work on it. She will need to remind the children to listen for the teacher to say their names and to pay attention to what the teacher says. From the very beginning, she should not permit children to answer out of turn. The children will very quickly come to accept the rule that the teacher decides who is going to be next. On rare occasions it may be necessary to tell a child who keeps interrupting and insisting on being first that he cannot play the games unless he can follow this rule.

The teacher must also be very careful not to immediately impose her own ideas about what the response should be on the child. If a child gives an unclear answer, ask him to tell more about it. His reasoning may be correct or nearly correct, but just different from the obvious answer. We certainly do not want children to learn from these tasks that the only right answer is the teacher's right answer. For example, if the child was matching forms and was asked to find two forms which were alike, he might say, "These are alike; they're both red and they both have torn corners." The teacher's response might be, "Yes, they are alike; they are both red and they do have little tears in the corners. Now can you find me another one which is just like this one because it is the same shape instead of the same color?"

Detouring from the Topic

The amount of detouring from the topic which the teacher should permit depends entirely on her particular group and the use that she is making of the games. Many of these detours may be of more value to the children than the game itself. Sometimes something which is brought up in the game **may** lead the teacher to change her plans for the small group session entirely, postponing the remainder of the game until the following day. As an example, this happened to us when the children were being tested for knowledge of materials. The three-year-olds became so fascinated with exploring the textures of their own clothing instead of the fabric samples that we simply stopped and talked about this for the remainder of the period.

On the other hand, groups can get into the habit of going off into areas which are not particularly productive or one child can dominate with long and involved recitals of things that he or she has done. Occasionally, if a child has not been talking or not participating, again it is worthwhile to let the rest of the aims of the group go and to let the child talk. However, if this happens frequently, the teacher must say, "Tell us about that later; right now we want to finish playing our game." She should be sure that there is a chance later for the child to express himself, at least to the teacher.

Order of Games

In ordering the games within each concept area, we have tried to put those which seem most basic at the beginning--basic in the sense that the teacher may see them as high-priority concepts which she will want to emphasize over a longer period of time, while the games included at the end are possibly of lower priority. It should be noted that a few of the tasks are listed as inappropriate for three-year-olds (unless unusually mature) and that a few others require that one task be given before another one is tried. The teacher will probably want to alternate concept games from the qualitative and informational areas for variety. However, the order of the tasks otherwise depends on the interests of the teacher and the way that her individual curriculum develops over the course of the year.

Recording Knowledge of Concepts

The method for recording the results of concept games will depend on the way in which the teacher wants to use them. While it is possible to record each child's knowledge of each individual concept, it is difficult to do without an observer in addition to the teacher; and in practice such information would not be very useful because the teacher would be so snowed under with the bookkeeping that she would have no time to teach.

The typical teacher, however, will probably take brief notes on a pad on her lap as she works with the tasks and will obtain the following kinds of information for each game:

1. An overall idea of the knowledge or ability of the small group with which she is working.
2. The names of children who seem to know considerably less than the other children.
3. The names of children who are knowledgeable enough to make a contribution to the group, or who seem ready for concepts which are more advanced than presented in the game.

Recording this information for planning use can be done in any form which the teacher prefers, but it is important to jot it down somewhere immediately after working with each group. One version might be a sheet of paper for each concept which the teacher could keep in her planning notebook. Below is an example of how such a sheet could be organized (although it would not need to be typed). Note that this form includes space for jotting down teaching ideas.

Concept: GEOGRAPHY
Date: February 17, 18
Teacher: LaCord

Group I:[1] Warren: knows only most familiar
Timothy, Anne, Betsey: know most, some confusion lake-ocean, creek-river
Patrick: ???? Tired and not interested

Group II:[1] Margot, Paul, Johnny: know most
Martin: very knowledgeable, interested. Will bring in book on mountains.
Cynthianne: absent
Group curious about where our road goes.

Group III:[1] Yukiko, Maria: needs help with English words for most
Kirsten, Golda: knew most
Jose: knows words and lots of facts and personal experiences

Summary: All of groups could use some teaching on less familiar concepts, especially differences between similar concepts, such as lake, ocean. Warren, Yukiko and Maria need special help (try to involve Patrick and Cynthianne for diagnosis). Give Jose and Martin the chance to be resource people. Start them on maps.

Ideas for Teaching: Field trip to Ellis Park via rapids and falls (follow our road to end as a starter). Use *National Geographics* for Bulletin Board and art projects; sand table (get sand, foil for water, buy more Matchbox cars); Two Little Trains, Muffin at the Seashore, Martin's mountain book; Slide show (collect mountain, ocean, desert slides from friends); and tie in Geography with different kinds of plants and animals which live in different places.

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[1] In this case one teacher took all children in three different groups.

COGNITIVE SKILL GAMES

The concept games in this section test primarily cognitive skills, though some concepts are also considered in the process. Two games are more or less isolated, the Memory and Auditory Discrimination games. The others follow a sequence which was begun with the discussion of matching and copying in the chapter on motor skills. (See *Perceptual Motor, Diagnosis* and *Suggestions for Teaching.*)

As noted in Chapter 4 cognitive skills may be primarily "perceptual" such as putting together two or more things that look alike (matching) or reproducing something as exactly as possible (copying). On the other hand cognitive skills may be more "conceptual" in that the child must put together two objects which are similar in one respect but different in others. Here he must abstract the principle by which they are similar (classifying); or he must both abstract the principle and order the objects or events according to this principle, for example, by difference in size or sequence in time (ordering and sequencing). When the word "sorting" is used, it may refer to matching a number of identical items such as putting pennies in one box and nickels in another, or it may refer to classifying, for example, sorting a variety of cloth pieces into stacks by color.

Of course it is very difficult to say where one process stops and another starts; some psychologists say that there is no real difference. One must have the *concept* of alikeness and the *concept* of red to sort all red items into a pile. One must *perceive* size differences in order to put objects into a series increasing in size. Further, when objects are very similar but not identical (for example, leaves from the same tree) and are to be sorted, should it be considered matching or classifying? For our purpose we have called such tasks matching, but others might disagree.

For practical purposes, this discussion is a little theoretical, in that our real concern is to help the child learn to organize his world and to make sense out of the immense amount of information which he is continually taking in. However, in our own thinking we find it helpful to see how lotto games and sorting nuts fit into a sensible framework. Some other cognitive skills such as conservation have not been touched upon because we feel that they are best learned in informal situations such as exploring clay, water, and sand in many different ways rather than through formal teaching.

MEMORY

Concept Game for Diagnosis and Teaching

Cognitive Skill:	Memory.
Materials:	A deck of six cards approximately 4" x 7" cut from heavy tagboard and illustrated with cut-outs made from colored construction paper (see illustration below or use other appropriate pictures); and a piece of cardboard, tagboard, or heavy construction paper (8 1/2" x 11") to be used as a screen.

Procedure:

1. Show the children the blank card and a card with an apple. Tell them that this game is to find the apple when it is hidden. Put the blank card and the card with apple face up in front of the first child and tell him to look at them carefully. Now turn over the cards, momentarily put the screen up to block the child's vision, remove the screen, and ask the child to find the apple. Shift the position of the apple from one child's turn to the next. Continue in the same manner until each child has had a turn.

2. Now add another card (the rectangle with the circle above, see illustration) and again show the three cards. Turn each over, block the direct vision with the screen, and ask the child to again find the apple. If a child does not find the apple on the first try, put the card he chose face down and let him try again until he finally does find the apple each time. This assures that each child will always be successful.

3. Now add the fourth card (circle superimposed on a square, see illustration) and again ask the child to find the apple. (If children were not able to find the apple using only three cards do not go on to this step.)

Variations and Use as a Teaching Tool:

1. Using the same suggested procedure, start the game with two apples and one blank card and ask the child to find the two matching apples. If children can do this, add a fourth card and later a fifth if they are still successful. Finding the matching pair within a group of cards is more difficult than finding a single card, so do not attempt this unless the group generally had little difficulty with the first procedure.

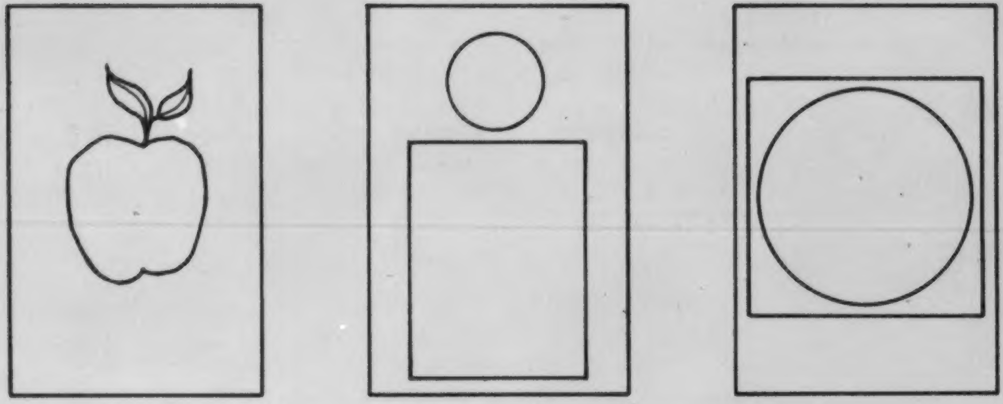
2. Make a duplicate of each of the suggested cards and play a simple game of matching pairs. Lay out the cards in two rows of four with each row face up. Tell the children that you are going to turn over all of the cards so that they can't see them and they are to try to find a pair that match by turning over two cards. If those two cards are a match, they keep them. If the two cards are not a match, they are turned over, face down; and it is the next person's turn. Let the children look at the cards before you turn them face down. Then let the first child have a turn. Be aware of any child who might be upset if he does not get the match and let him play last when he will be sure to match. This game will probably be most successful with fours or fives.

Cautions and Suggestions:

1. It may be advisable to make cards with representational objects rather than nonrepresentational shapes so they can be referred to by name. This would be especially true when playing the matching game.

2. If your children enjoy this game, variations may be added by introducing other cards and having the cards available to permit children to play it alone or in pairs during free play time.

Below are suggested illustrations to be used for the cards:



Cards for concept game on memory

General Suggestions for Increasing Memory Span

It is somewhat difficult to know where to start to help children to remember more effectively. The gimmicks used by "memory courses" for adults are certainly not applicable. Below we describe two approaches which may be helpful.

The first simply involves practice in what we have called "immediate memory," the ability to recall something which has been seen or heard in the immediate past. Most children love games which provide the opportunity for remembering; the concept game just described was a favorite of our children. Many games developed for other purposes can be changed slightly to add a component of memory. For example, a child can play a version of the Auditory Discrimination concept game in which he puts objects into different colored cans himself, mixes their order, and then tries to remember which object he put in which can. Another example might use pictures of fruit. Here each child is given a picture of a different fruit and is asked to name it and show it to everyone. Then each child puts his pictures face down in front of him, and the teacher counts to ten. In the simple version she asks, "Will the child who has the banana hold it up." For a more difficult task, she asks any child who remembers to point to the child who has the banana.

Such games can obviously be played without the teacher once the children learn them, with the teacher just suggesting an appropriate level of difficulty. Some older children are ready for a simple type of Concentration, and a few kindergarteners' memories are so good that they can consistently beat the teacher at an adult version of the game.

One technique for helping memory is to read a book containing a good deal of repetition and to pause before one of the repeated phrases to see if the children insert it, for example "Caps for sale..." (This technique should never be allowed to interfere with the flow of the story, however. If no one responds immediately, the teacher simply fills in herself.) Occasionally a teacher may tell a familiar story and "make a mistake" to let the children have the fun of catching her at it. Some children also enjoy retelling a familiar story themselves as they look at the pictures.

A second approach to helping children with memory involves longer spans of time. Here the teacher again sets up situations in which the child is asked to remember something; in these situations there is not only the factor of memory but also that of simple understanding of the passage of time. (See also *Time, General Suggestions for Teaching.*)

The younger the child, the more difficult it is for him to conceptualize things which happened yesterday or tomorrow. With very young children the teacher can begin by simply bringing discussion of past and future into the daily schedule. For example, she might tell the children when they come in the morning that they will be going on a walk after juice and ask at juice time, "Do you remember what I said we'd do after juice?" At a slightly more difficult level she might say, "I'll put your pictures on the bulletin board after school, and tomorrow you can look at them." Then the next day she could ask the children, "Can you find the picture you painted yesterday?" (Many will need help.)

The next step is to ask children questions which arise naturally, "Where did we leave the playdough yesterday?" or "Let's see, what kind of juice did we have yesterday?" Finally the teacher might ask a child (in appropriate contexts), "What kind of ice cream did *you* have on your birthday?" or "Did you see many boats on your vacation last summer? Can you tell us about them?"

In using any such questions, the teacher must be careful to avoid making the child feel that he is being quizzed--if he is not interested in the questions, don't push it. Avoid also the competitive flavor of "Who remembers...?" kinds of questions used too frequently. However, just finding that the teacher is an interested listener will often be all that is necessary to encourage the child to recount things that happened at home or on the way to school.

Activities for Helping with Memory

Large Motor- 1	Obstacle Course
LM-14	Gymnastics
Language-21	Listen and Do
L-26	What Is Gone? What Is New?
L-27	Chain Story
L-32	What Did I Do?
L-34	Find the Penny

(Also note variations of the memory concept game.)

Books

(Any books with repetition are good.)

Brown, Margaret Wise; *The Noisy Books*
MacDonald, Golden; *Red Light, Green Light*
Slobodkina, Esphyr; *Caps for Sale*
Yashima, Taro; *Umbrella*

AUDITORY DISCRIMINATION

Concept Game for Diagnosis and Teaching

Ability and Concept: Matching sounds, loud and soft.

Materials: Awake or other cans with plastic lids or covered with aluminum foil held on with rubber bands; dried lima beans, rice, nuts, sugar or salt, macaroni, dried thyme, basil or other spice, dried split peas (other varieties may be used to make distinctions between sounds); and a tray to hold cans.

Procedure: 1. Make two cans each of the above substances. Test each pair before they are used with the children to make sure that the sounds are exactly alike. The above items are suggested as there is a definite sound distinction between each one. Mark the cans with matching numbers, small enough so children do not match by the number.

2. Put one can of each kind on the tray. Let each child choose a can and shake it to hear the sound. (We found that children seem to hear sound differences between their can and the ones the other children choose during this part of the game without making a special point of it.)

3. Put the matching cans on the tray. Let each child again shake his can and then by shaking and listening find the matching can with the matching sound. If the children are losing interest, resume activity on another day.

4. Now let all of the children shake both of their cans at once. Ask whether the sound they made was loud or soft. The children will recognize at once that the sound was very loud. Now tell the children to try and find the one who has the can that makes the softest or quietest noise. Let each child shake again in turn. Repeat this procedure to find the can that makes the loudest noise.

5. Give each child two cans and ask him to shake each one separately. Now ask "Which one makes the louder noise?" "Which one makes the softer noise?" Continue in the same manner until all children have had a chance to test two cans. A variation for further distinction

would be to give each child three cans and ask him to find the loudest, softest, and in between.

Variations and Use as a Teaching Tool:

1. Also illustrate sound differences by putting the same substances in different containers such as metal cans, plastic dishes and cardboard boxes.

2. Choose items that sound almost the same and work toward the children hearing fine distinctions. Example: sugar and sand, etc.

Cautions and Suggestions:

1. Establish the idea of taking turns to avoid constant shaking of cans.

2. Let the children see what is in the can after they have matched sounds. Before the game begins let them know they can do this later to avoid lids being removed while the game is in progress.

3. Do not attempt to make high, low distinctions with these sounds. High, low distinctions are very difficult and should be distinguished through use of musical instruments.

General Suggestions for Teaching Auditory Discrimination

In this section on auditory discrimination, we are assuming that the question as to whether the child has normal hearing ability has already been considered in the teacher's assessment of his use of language. However, because some types of hearing loss come and go and others which are minimal may not show up without a careful check, the teacher may want to consider referring a child for a hearing test if he seems to have considerable difficulty with auditory discrimination games, even though his understanding of speech seems to be normal.

In this task we are asking another kind of question. Can the child listen carefully enough to distinguish small differences in sound? The importance of auditory discrimination to later success in reading and spelling is obvious. Of equal importance to school performance is "learning to listen," to pay attention to speech. And to return to one of our overall goals for children, "learning to listen" is another way of intensifying the child's experience of the world around him.

The teacher can help children begin to listen by directing their attention to the sounds around them--which means that she must learn to listen herself. Water running in the pipes, steam in the radiators, the bubbling noise of blowing through straws at the water play table, the sound of birds chirping outside, the crunch of dry leaves being walked on--all can be attended to and commented on as appropriate. As the children become more aware of sounds, the teacher can ask them to begin to make discriminations, "I hear a funny noise outside; what do you think it is?" or, "Listen to those footsteps coming; I wonder if it's a man or a lady or a child?" Occasionally the teacher may ask the children if they can imitate the sounds that they hear.

Loudness and softness of sounds can also be discussed in the daily classroom situation. Again the teacher can be sure to use these terms in everyday situations or help children to use them. For example, "Tia, would you like an instrument that makes loud or soft sounds today?" or "Let's use very soft whispers inside because Mike is still asleep. When you get outside you can shout as loudly as you like." Also appropriate to introduce is the concept (and value) of silence or quietness. "Let's see if there are any little noises to listen to if we're all just as silent as we can be."

Discrimination of high and low can best be done in the context of music teaching. We have found that these concepts are very difficult for children and are almost impossible in listening to sounds other than musical notes.

Specific instruction in helping children make phonic discriminations is usually a part of the kindergarten curriculum. However, a great many four-year-olds are already trying this kind of experimentation with sound; and it is often appropriate to try phonic games at this level. Since children really enjoy games of this kind, it is unfortunate to let their initial experiences with word sounds be through workbooks. The teacher can pick up and encourage the spontaneous play on words and rhyming that fours often do (even though it often goes along with hard-to-tolerate four-year-old silliness), and can introduce games of this kind which can then be played by the children themselves. (See also *Early Reading*.)

Activities for Teaching Auditory Discrimination

Large Motor-30	Oiling Tricycles and Wagons
Language-18	Whisper Tube Talking
L-23	Rhyming Words
L-28	Listening for Initial Sounds
L-31	The Mistake Game
L-33	Guess Who Said That?
L-36	Water Harmonica
L-37	Sounds of Containers
L-38	Identifying Hidden Noises
L-39	Counting Noises
L-40	Sounds of Dropped Objects
Music- 1	Listening to Music
M- 3	Singing
M- 4	Musical Instruments
M- 5	Finding the Note for Singing a Song
M- 9	Music Box
Trash to Treasures-42	Sound Experiences

Books

Brown, Margaret Wise; *The Noisy Books*, *Shhhsh Bang*
Keats, Ezra Jack; *Whistle for Willie*
Lane, Carolyn; *Voices of Greenwillow Pond*
Merriam, Eve; *Andy All Year Round*
Spier, Peter; *Crash-Bang-Boom*
Victor, Joan Berg; *Shh, Listen Again*

CLASSIFYING BY FUNCTION AND MATERIAL

Concept Game for Diagnosis and Teaching

Ability: Classification.

Concepts: Function and Material.

Materials: A tray with pairs of items such as the following, or others with which the child is familiar (at least one pair more than the number of children):

Hammer-nails
Comb-brush
String-beads
Candle-match
Nickel-penny
Triangle-clapper
Knife-spoon-fork
Paper-pencil
Screwdriver-screws
Hat-mittens

Procedure: 1. The teacher has all items arranged on large tray. She tells the children, "We are going to play a go-together game. When I put the tray in front of you it will be your turn." She holds up one item and says to the first child, "Do you know what this is?" If the child does not know, the teacher tells him the name and then asks if he can find something on the tray that goes with it. The matched items are taken off the tray, and the procedure is repeated until all the children have had one turn.

2. Place the items on the tray again (other items may be added if the children had little difficulty with #1 of the procedure). Instead of holding up one item, this time the teacher asks the children to look carefully at the tray and find two things that go together. She then asks the child to tell what they are used for or how they are used.

3. At this time if the group still shows interest in the game, (this can also be done at another sitting) the teacher can ask a child to find items made of the same material.

Cautions and Suggestions: 1. If children do not seem to understand association by function at all, the teacher can give some illustrations; and if they still have great difficulty, she can shift to matching by color to give a success experience.

2. At any stage in the task children may give matches which are different from those which the teacher had in mind. Often these are not random but based on legitimate logic from the child's point of view. For example, putting nails and screws together is just as sensible as hammer and nails.

General Suggestions for Teaching About Function and Materials

The above concept game involves looking at a mixture of different concepts, and the teacher may want to stress one or another. It is also closely related to several of the other games which may have been played before or afterward.

One purpose of this game, completely unrelated to the particular objects used, is to help children continue learning to categorize objects. In other games they have been asked to match objects by other more concrete characteristics such as color or size. Here the teacher is asking them to group things by more abstract principles, either what they are for or what material they are made from. The ability to think about things in this more difficult way is very important to later schoolwork as well as to problems of real life.

Variations of the concept game or other sorting games can be played to help children develop the ability to think in this particular way. For example, the teacher might put out on the table many different pieces of clothing and a book and ask the children to find which one did not belong and to tell why; or she might suggest that the clothes be sorted according to the kind of material from which they were made.

The other purpose of this game is to help children learn and think about what objects are for and what they are made out of, rather than just learning their names. For these purposes almost any objects could be used, and the game may be played several times using different objects each time. Some of the other concept games such as Household Objects and Tools and Machines can also be played in such a way as to test knowledge of both functions and materials.

In addition the teacher will find many opportunities simply to comment on material and use of various objects in the room. As she wraps up cookies in aluminum foil, there could be a discussion of what the foil is and why it is used; or a real sponge might be brought in for scrubbing and could be similarly discussed.

Another type of experience intended to help children think in terms of function might be to bring in some new object and ask the children to see if they could figure out what it was for. (It should have some application to the program.) For example, she might bring in a food mill before making applesauce, a staple puller for use with paper and stapler, or a telescope to take on a nature walk.

Activities for Teaching Classifying Skills

Table-20	Sorting Dried Foods and Other Objects
T-21	Sorting Foreign Coins
T-22	Sorting Household Objects
T-23	Sorting Day and Night Pictures
Language-24	How Are They Alike?

ORDERING BY SIZE

Concept Game for Diagnosis and Teaching

Cognitive Ability: Ordering.

Concept: Size.

Materials: (for five children)

1. Five sets of seven buttons each in graduated sizes, five envelopes to hold buttons and to use as a "table" on which to order buttons, and five paper baking cups to hold buttons when envelopes are emptied.

2. Seven tinker toy sticks in graduated sizes, and seven tinker toy connectors to be used as bases for sticks.

3. Pencils or tongue depressors in graduated sizes; or pegboard approximately 10" x 10", golf tees, and strong rubber bands of various colors.

Be sure to read cautions and suggestions before playing the game.

Procedure: 1. Place three middle buttons of the series of seven in front of the children on a small tray or card. Pointing to the big ones, say, "Look these buttons are different sizes, what do we call this one?" If the children do not understand what you want them to say, ask one child, "Which is the big one?" Repeat with the words "little" and "middlesized," moving the buttons in front of a different child and changing the position of the buttons each time (never have the middlesized one in the middle position). Don't try to test middlesized with every child since you can check this concept in the height and length portions.

Remove the middlesized and the small button leaving the big one. Ask the group, "What did we call this one? Yes, it's a big one." Then add a bigger button and say, "What do we call this one?" Try to elicit "bigger." If they do not know the word, say (pointing) "This one is big, but this one is bigger." Repeat with "biggest" and then repeat the whole procedure with the little button, the littler, and the littlest.

Now give each child an envelope containing five or six buttons of increasing size and ask each one to arrange them in order. "Now let's see if you can put your buttons in order from the biggest to the smallest." Try to see if children have the concept of ordering by size, then help those who need it.

2. Follow the same procedure as above with seven tinker toy sticks of varying lengths (you may have to cut some off) which you stand in bases made from tinker toy connectors or clay balls. Test for the terms "tall," "short," and "middlesized." If the children have had no problems with ordering the buttons you can omit ordering with the sticks. Otherwise give each child a turn.

3. Follow the same procedure with pencils sharpened to various lengths, tongue depressors cut to various lengths, or rubber bands stretched on pegboard for the terms "long," "middlesized," and "short."

Cautions and Suggestions: This is a difficult task to give because we are trying to get at both basic size vocabulary (big, bigger, biggest) and the concept of ordering by size. Children often do not have these concepts and it requires careful observation to determine which ones they know. The tasks and directions are also a little complicated, so the teacher should run through it two or three times with an adult serving as child before attempting it with the group.

General Suggestions for Teaching Size Concepts

We have found in working with preschoolers that most of them use a relatively simple vocabulary of size words--usually the terms "big" or "little" in cases where adults might be more specific and say "tall" or "short," "long" or "short," and "wide" or "narrow." The term "middlesized" was rarely known by the children tested, though they grasped the idea quickly once it was presented. Many use comparatives and superlatives correctly in practical situations ("I want the biggest one!" or "Hey, you're littler than me!") but have difficulty in using them in more abstract situations such as labeling three items, "big, bigger, biggest." They are also likely to use a few more colorful superlatives such as "enormous" or "teensy-eensie" to emphasize size differences; or in some cases they will simply repeat a size word to form a superlative, such as "The circus elephant was big-big-big."

Therefore, the teacher should try to find out whether children understand and recognize size concepts when the words are used by others and, if so, whether they are able to use the words correctly themselves. Probably some or all of the children will need help with size concepts, so the teacher will need to work on recognition first and then on helping the children to use the words.

First, staff should deliberately try to be accurate in their use of size words; adults, too, tend to use "big" and "little" a great deal and to avoid comparatives, especially in talking with children. In passing the cookies around the teacher might say, "I'm going to take the smallest cooky because I'm not as hungry as you are"; or in greeting a younger brother who has not been to school for some time she might say, "My, Jimmy is much taller than he was the last time he came."

Second, games and stories can be introduced which include concepts of size. These can be modified from games originally intended for other purposes. For example, in a memory game where children are to guess under which object something is hidden, the objects may be three colored circles of varying sizes; and the teacher may expect the child to tell her, "It's under the middle-sized one," rather than just pointing. Stories such as "The Three Billy Goats Gruff" may be used, or the teacher may make up her own.

One thing about size concepts which adults take for granted, but which is very confusing to children, is the relative nature of all size concepts. Thus we can talk about the little elephant or the short giraffe without having to stop to consider that we mean the elephant which is little in relation to the expected size for elephants or a giraffe shorter than most giraffes. However, for a child to understand that a given object may be called big or little depending on the context requires both maturity and experience. The teacher will therefore want to give fours and fives some specific experiences to help them with this idea. Thus, the children might be given marbles of different sizes to use with the table blocks (as animals for a zoo, for example) or to drop into holes of different sizes in a box lid. The teacher could talk about the biggest marble and then compare it to a ball nearby saying, "Of course the marble is much littler than the ball, but it's big for a marble." Or, using her imagination, the teacher might improvise a flannelboard story about a little mouse and a big mouse, a little elephant and a big elephant in which the animals argue about who is big and who is little.

As with all fairly difficult concepts, the best examples are those which come up naturally in activities in which the children are already interested, so that if the children seem to fail to understand, the teacher need not press the point, but can simply wait for another time. For example, when the children are measuring themselves, the teacher could make a chart of their heights and help them understand that all teachers are taller than all nursery school children, but some are taller than others (keeping in mind the need to avoid any implication that it is better to be a tall child or a tall teacher).

Activities for Teaching Size Concepts

Large Motor- 4	Step on the Squares
LM-16	Shadow Play
LM-21	Bean-bags
Art-33	Toy Money
Table- 6	Nuts and Bolts
T- 7	Fitting Lids on Containers
T-28	Which One Comes Next?
Language-24	How Are They Alike?
Science- 9	Measuring Children's Heights
Miscellaneous- 2	Exploring Table

Books

Schneider, Herman & Nina; *How Big Is Big?*

Activities for Teaching Ordering

Table-27	Ordering Cans by Weight
T-28	Which One Comes Next?

SEQUENCING

Concept Game for Diagnosis and Teaching

Ability: To put in order of time of occurrence.

Concepts: First, last.

Materials: Sets of cards with *three* in a set demonstrating sequence, for example:

Picture 1

Foot with stocking
Bees on flower
Chopping down a Christmas tree
Mother hen on nest
Pumpkin seed in ground
Skinny mouse coming to a big piece of cheese

Picture 2

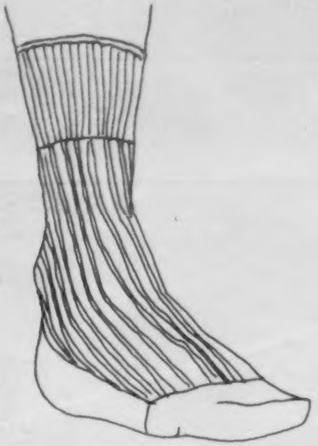
Foot with shoe and stocking
Bees around hive
Driving home with tree on top of car
Egg cracking
Pumpkin vine with pumpkins, show roots
Mouse eating the big piece of cheese

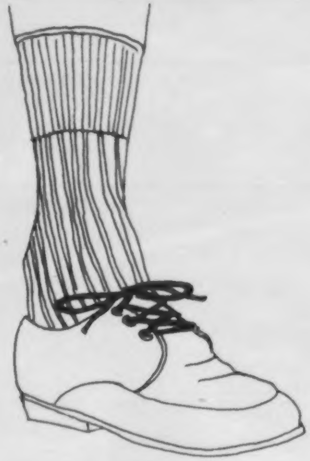
Picture 3

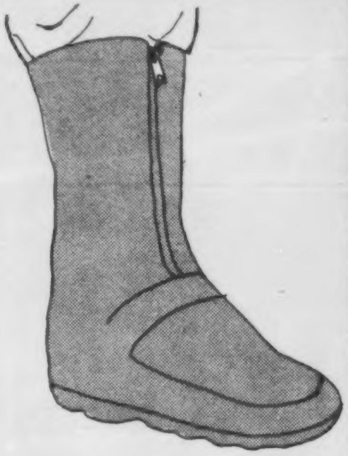
Foot with boot
Jar of honey
Decorated tree
Baby chick from cracked egg
Carved jack-o'-lantern
Mouse big and fat

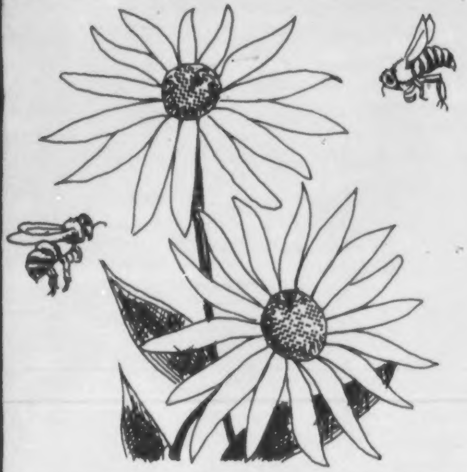
(See drawings on the following pages.)

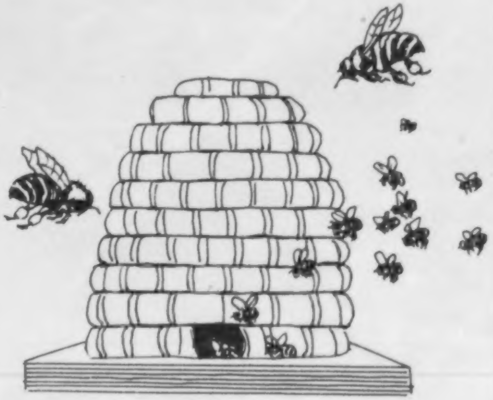
Procedure: 1. Tell the children that they are going to see pictures. Ask the children to tell you what happens first, what happens next, and finally what happens last. Using a picture set of three cards, demonstrate. Hold up the three pictures of the foot with the stocking, a shoe, and a boot. Ask the children to look at each picture and ask, "What would you put on your foot first?" Continue in the same manner until the sequence is established. Say, "Now we have put these

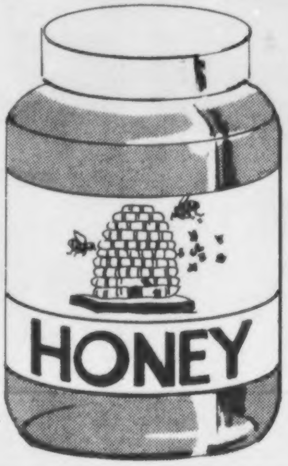








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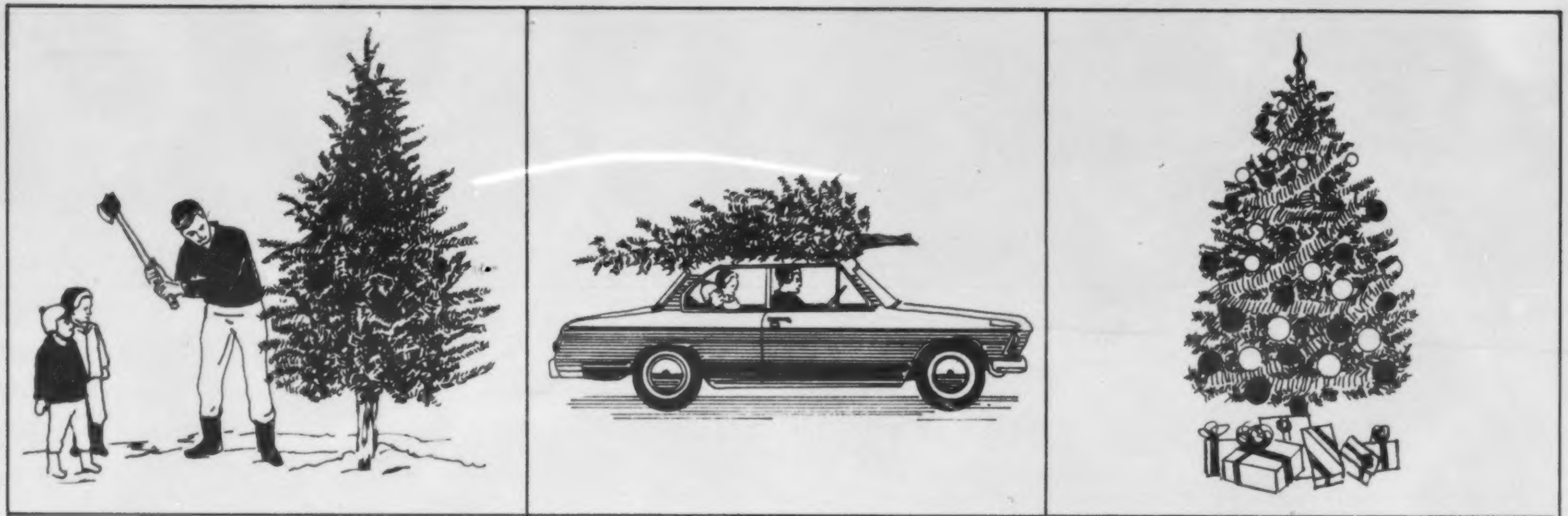

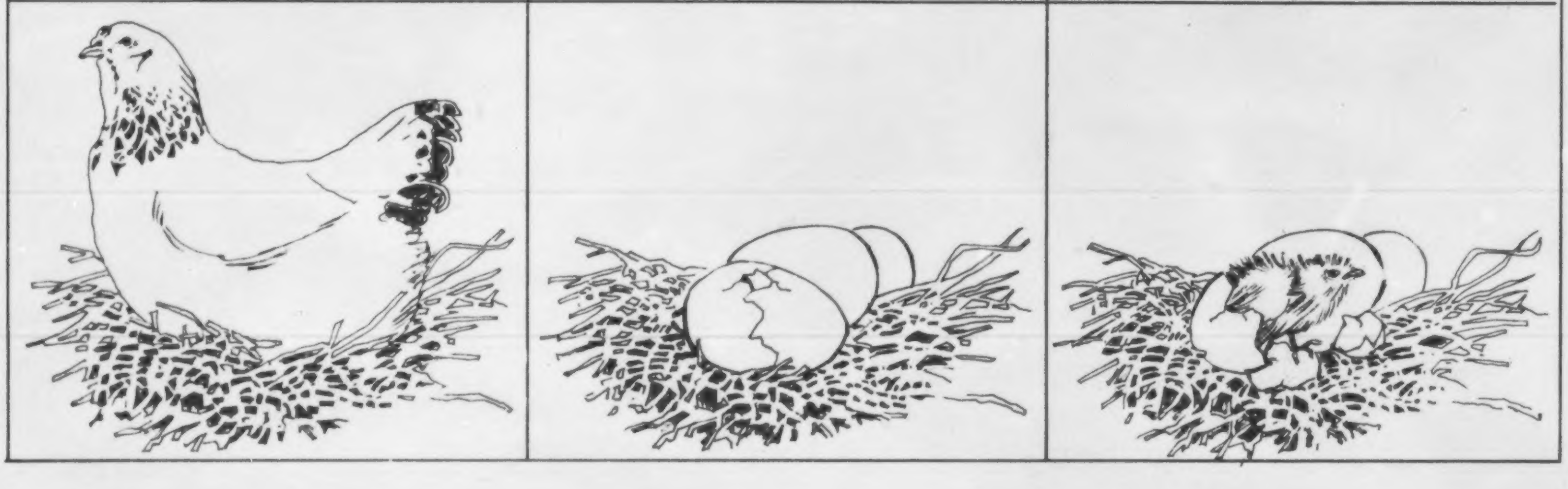

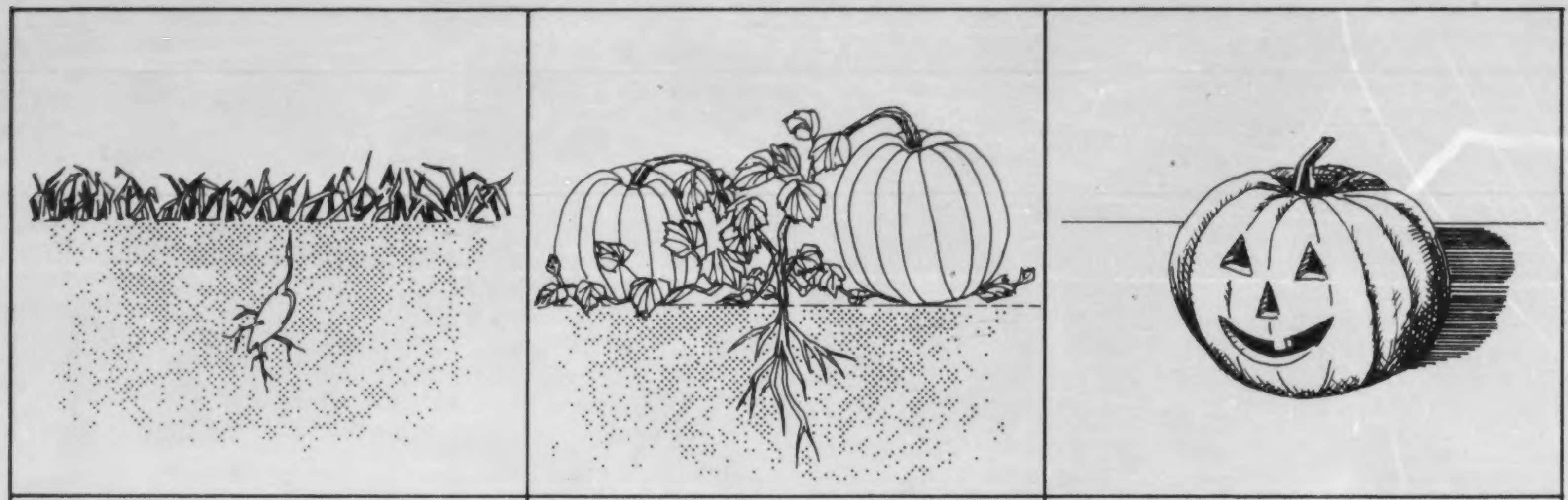

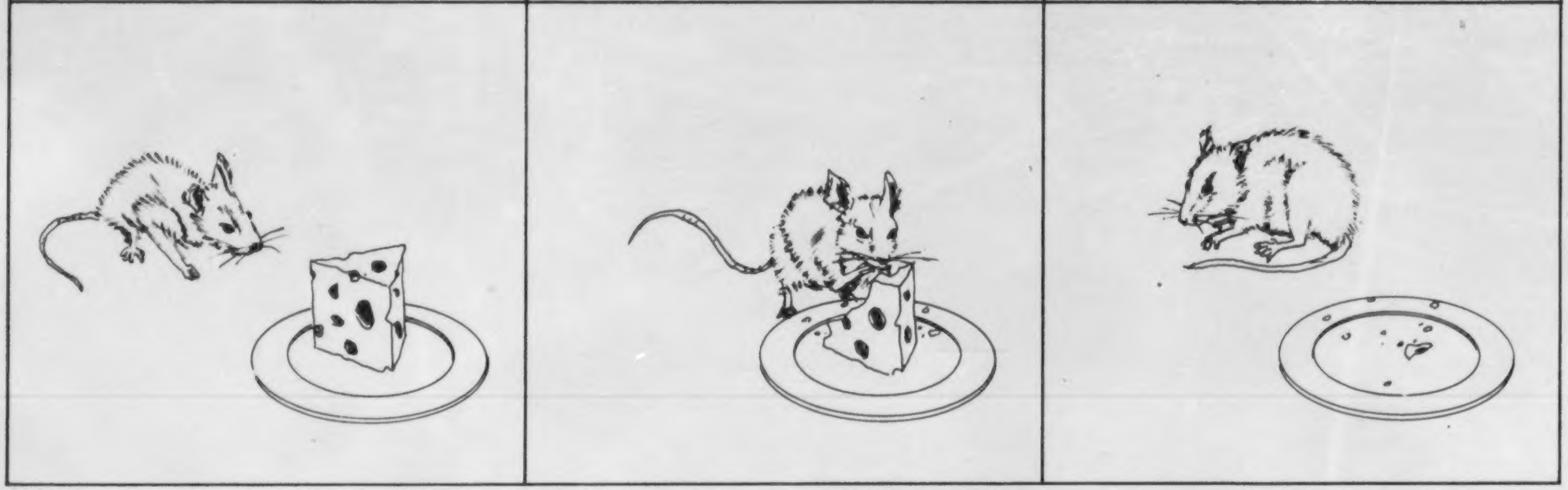

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three pictures in order. We would put on your stocking first, then our shoe next, and finally we would put on our boot." Continue the same procedure using another set of pictures if the children do not understand what they are to do.

2. Now give each child a set of three pictures and tell him to look at the pictures and put them in the order of what happens first, what happens next, etc. As the children are looking at their picture cards, begin with the first child and ask him to choose the picture that would happen first. If the child has difficulty, help him by first discussing each picture to make sure he knows what each picture is. Now ask him again to put them in order. If you are aware of continuing difficulty take the first picture in sequence and begin the sequence talking about the reason it is the first, etc. Continue in the same manner with each of the children, noting those who have the most difficulty and those who seem to understand sequence readily.

3. If the children seemed to have difficulty generally, or if you would like to give specific children another chance (some children may not be sure of the directions and thus would appear to have difficulty), gather and switch the picture sets and proceed as suggested in procedure number two.

Cautions and Suggestions:

1. Generally this should be used as a test only with four-year-olds. It should be introduced to threes as a teaching game.

2. If making new cards, choose ideas that your children are familiar with. For example, many children may not have the concept that bees make honey, so it would not be appropriate to use this set.

3. These simple pictures provide a good opportunity for children to verbalize. Let them tell you why they choose to put the pictures in the sequence by telling what is happening in the pictures. Encourage their stories.

General Suggestions for Teaching About Sequencing

Sequencing is closely related to both sorting and putting objects in order by size, weight, or color. It refers to the process of understanding the relationship of events in time, and is, for most children, a more difficult kind of ordering than putting things together which belong together, or classifying objects which all can be seen at once.

Children can learn about order in time by having some order in their own lives. They also feel more comfortable if they know what is going to happen next most of the time. Thus, early in the year the teacher may usually try to follow the same schedule and will verbalize, "Next juice, then story, then we go outside"; or the children may do it for her.

In helping the child to understand the order which exists or can exist in the world around him, however, we definitely do not want him to develop a rigid idea that everything must be done just so--always in the same order. Rather, we want him to understand when ordering is a part of the natural order of things and when it leads to greater efficiency.

Thus, a child may comment regarding a visiting baby, "He can't walk"; and the teacher may help the child understand the natural sequence of human growth by saying, "No, he's a very little baby. He can't go at all now. Soon he will learn to crawl, and then later to walk, and then to run like you can. But that takes a long time." Similar explanations can be made about plant life or about how the planets go around the sun.

Children can learn about the value of order for the sake of efficiency by putting on snowpants, then boots, then coats, then hats, then mittens, with the reasons why this order works best explained as they go along. On the other hand, as the children are following a picture recipe in making a cake, the teacher might comment, "In this recipe it says to put the flour in before the baking powder. We could do it either way--it wouldn't make the cake taste any different, except that we might get mixed up if we don't follow the recipe."

Children can be given practice in ordering events themselves if the teacher uses stories with events that follow a given sequence several times, allowing the children to tell the repetitive part or to retell the story themselves perhaps using a flannelboard or three-dimensional characters.

Picture stories such as those in the concept game are available commercially (Seeques) or the teacher may make her own by buying 19¢ books and cutting them up (two copies to give both sides of each page).

Activities for Teaching About Sequencing

The variety of activities listed below were chosen because they can be done in such a way as to emphasize order in time. However, in order for them to serve this teaching function the teacher will need to think carefully about how she will present them to the children.

Large Motor-27	Group Games
Art-25	Tie Dyeing
Table-27	Ordering Cans by Weight
Language-32	What Did I Do?
Science- 2	Measuring Plant Growth
S- 5	Forcing Spring Leaves and Flowers
S- 9	Measuring Children's Heights
S-10	The Visiting Baby
S-18	Photosensitive Paper
Social Science- 1	Daily Classroom Cleaning
SS- 2	Window or Mirror Washing
SS- 3	Washing Dolls and Clothes
SS- 6	Moving Day
SS-13	Car Wash
Food- 9	Picture Recipe
F-24	Butter
F-25	Pizza
F-26	Cake Making
F-27	Pancakes
F-31	Jello
F-32	Ice Cream

QUALITATIVE CONCEPT GAMES

The concept games in this section test children's knowledge about the physical properties of things, such as color and form. Two games which were included in the previous section because they deal with cognitive abilities might also have been included here. These were Ordering by Size, which covered both the ability to order and size concepts, and Classifying by Function and Material, which considered both classifying and function and materials.

COLOR

Concept Game for Diagnosis and Teaching[2]

Concepts: Color names.

Materials: Strips of colored paper or cardboard, about 1 1/2" x 4", in red, blue, yellow, black, and white; one set for each child and one set for the teacher. Colors should be bright and clear.

Procedure: 1. The matching task begins as the teacher holds up one strip and says, "Hold up this color." The teacher may hide her set under the table, to hold the childrens's attention as they anticipate the next color.

2. The second part tests the child's ability to recognize each color. The teacher says to the whole group, "Now show me the red one," etc.

3. The final part of this task tests naming ability. The teacher says, "I need some helpers to put the colors away. Jane, please hand me all of this color. What is its name?" Or she can ask all of the children to hand one color to one child and can ask that child to name the color they are giving him.

Variations and Use as a Teaching Tool: 1. Once children have mastered the first set of colors, the teacher can add secondary colors or less common colors such as pink or lavender, a few at a time. For older children, many of whom may have good color concepts, have green, orange, and purple strips ready.

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[2] For testing children individually, see *Individual Testing Session*.

2. Use this task as a teaching tool, and give children the correct name if they make an error or are unable to answer.

Cautions and Suggestions:

1. If young children seem confused, start with only two or three colors at a time.

2. If children are unable to recognize colors, or if they lose interest in the game, leave the naming portion until a later session. As with all games, be careful not to overuse it.

General Suggestions for Teaching About Color

Color is probably the concept area to which nursery school and kindergarten teachers have paid the most attention in recent years--both because most people seem to think that all children should know their colors before they reach grade school and because the color of objects is one of the easiest things to stress in talking about them.

Therefore we find many teachers repeating color names over and over and frequently asking, "What color is this?" Much of this may be wasted if the particular child either already knows his colors or has no idea of color differences at all. Worse, children can get bored with the whole idea of color if teachers push the concept continually. Thus it is important to assess the knowledge of individual children fairly carefully but without overdoing either the diagnosis or the teaching. One should also be alert to children's interest in the topic. Many young threes aren't ready to learn color names. If the child at any age shows disinterest or resistance, the teacher should limit herself to using color words frequently but not asking for color responses from the child.

For the children who as yet know no colors, yet are interested, the teacher should concentrate on color matching activities until she is sure that they are able to do this well. This can be done informally as the child is involved in free play by commenting, for example, "That's a nice red skirt you're putting on the doll; I wonder if there is something else red you could put on her?" Or the teacher could use matching games. (See the activity list below.) Matching is usually easy for three-year-olds and above, and it should take relatively little time for the group to master this level. (However, many children who can name colors still enjoy matching games, especially when colors differing only slightly are used.)

After children have mastered color matching, activities using color recognition (where the child points to the color as the teacher uses the word) and color naming can be introduced, at first trying to teach only two or three colors, then adding others as the children progress. Finally, the child who is able to name correctly all the basic colors (red, blue, yellow, green, purple, orange, white, gray, brown, and black) can be introduced to less familiar colors (pink, tan, turquoise, etc.). Often the same activities can be used for teaching children who know only one or two colors and those who know several, if the teacher can keep in mind each child's needs.

We hope that the child will learn, with the teacher's help, not just to know color, but also to enjoy it. Color is one of the most interesting and beautiful things about our world. So the teacher can say to a child who is happily mixing paint into a rather nothing color, "Isn't it funny how all those bright colors mix together to look like mud?" Or she can say about the grass after a rain, "Look how clean and green the grass looks."

Just in the kind of art materials which are supplied or the way the room is decorated, the teacher can help children enjoy color. Colored paper should be bought in bright, clear colors rather than in dull, muddy ones. While there are times when the teacher will want the children to be able to experiment with mixing paints, she should help them learn to keep brushes in their own jars to keep the paints at the easel from getting muddy. Magic markers, craypas, or colored chalk can be used often, since the color quality which they produce is different from that of crayons.

In decorating the room the teacher can give an impression of colorfulness through use of children's paintings, bright wall hangings, plants in the window, etc., so that children can have continuous experience with the pleasure that color in the environment brings. (It is probably better to keep the unchanging aspects of the room such as walls, chairs, and tables relatively neutral and bring in color in those things which can be changed from time to time as they grow dingy or one tires of them. Bright yellow walls, blue tables, red chairs, etc. can make it impossible to see and appreciate the more subtle use of colors in other areas.)

Activities for Teaching About Color

Large Motor- 4	Walk on the Line
LM-21	Bean-bags
Art- 1	Tempera Paint
A- 2	Crayons
A- 4	Playdough
A- 8	Magic Markers
A-10	Chalk Drawing on Paper
A-11	Sidewalk Drawing
A-15	Paint Blots
A-23	Mural Painting
A-24	Paper and Cloth Dyeing
A-25	Tie Dyeing
Table-15	Fabric Sample Box
T-19	Matching Game
T-29	Dominoes
T-33	Playing Cards
Language-22	Jump Up and Do Something
Science-16	Cellophane Tubes
S-17	Color Mixing
Food-11	Dip and Taste Foods
F-18	Acorn Squash
F-31	Jello
F-33	Fruit Juice Popsicles
Trash to Treasures-35	Matching Paint Chips

Books

Bright, Robert; *I Like Red*
Lionni, Leo; *Little Blue and Little Yellow*, *Frederick*
McGovern, Ann; *Black Is Beautiful*
Slobodkina, Esphyr; *Caps for Sale*
Spilka, Arnold; *Paint all Kinds of Pictures*

NUMBERS

Concept Game for Diagnosis and Teaching[3]

Concepts: Numbers and counting.

Materials: Egg cartons with lids, one for each child plus one for the teacher (plastic ones are most attractive and durable); fifteen small objects (brightly colored wooden beads, tinker toy connectors, or small table blocks).

Procedure: 1. Give each child a carton containing from one to five objects, only one object to each division. The teacher begins by saying, "We are going to play a game of secrets today. Each one of you will get a carton full of secrets and no one else can see your secrets until you show them. Look inside. Now, Mary, how many do you have? Show us. That's right, count them!" Repeat the question to each child. Gather the cartons, exchange them and repeat as long as interest holds. The concept "none" is presented by having the teacher open her box, which is empty, and ask the children how many things she has.

2. With young children the teacher may begin with matching by giving children empty cartons, and letting them take from a bowl enough objects to match the number the teacher has. When this is mastered, the teacher can go on to recognition. Begin the game by asking, "Who has the carton with *three* in it?" i.e., always saying the number.

3. Children who know numbers from one to five may be tested or taught numbers up to 12. They may also be taught concepts of "more" and "fewer" by having the teacher show how many she has in her box and ask each child whether he has more or fewer than she has, following the child's answer by a comment such as, "Yes, you have one and I have four; one is fewer than four."

Variations and Use as a Teaching Tool: 1. Let each child make up his own secret carton from items placed on a tray. The teacher says, "James, make your own secret box by choosing five things from the tray to go into your secret box."

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[3] For testing children individually, see *Individual Testing Session.*

2. The teacher says, "Make your own secret box and tell me how many you put in it"; or, "Make a secret box and give it to your neighbor to count."

3. Cartons may be left in the room for children to use for their own counting games.

Cautions and Suggestions: 1. Try to be sure the game is at the proper level of the group. For young threes, only one and two objects may be used; for older fours, items up to 12. Be sure children who fail have a success experience on the next round.

2. Have a tray on which the children place the cartons each time you want to change the number or the cartons.

General Suggestions for Teaching About Numbers

Because number concepts are so basic and of concern to so many parents, the teacher may want to spend more time on them throughout the year than on some of the other concepts. This means that it would be desirable to test the children more than once during the year in this area to be sure of how much each child knows. Since children vary a great deal in how early they learn numbers, one cannot assume that any group will all be at about the same level. For example, one three-year-old child may have no concepts over the number two, while another is clear on numbers to around ten. It is particularly important not to frustrate children by asking them for number concepts completely beyond them, or to bore them by repeating counting activities which are very easy.

Numbers are one of the concepts most easily and naturally introduced into the day-to-day program. Concepts appropriate to the children's level can be used by the teacher in situations in which their immediate relevance is obvious. For example, at juice time the children can be told, "Today you may each take four crackers"; in making a cake, "We need two cups of flour"; or for a child with higher number concepts, "Can you count the children and teachers so we can tell how many glasses of juice we need?"

Actually any activity involving several objects or more than one child, such as hammering nails, doing puzzles, or playing at the sand table can be used by the teacher to alert children to the use of numbers in a natural way. *However, just as with colors there is a tendency to bring numbers continually into the program to the point where children become bored with them, or where too much time is being spent on this one area.* The teacher can take her cue from the children and stop working with numbers when they seem to lose interest, introducing them again in a few weeks.

An exception to the rule to use counting primarily as the need for it occurs naturally comes when some children become intrigued with the process of counting and want to do it just for fun. Then the role of the teacher can be to suggest groups of items to be counted which are appropriate in number to the child's level, and to help with omissions or corrections. Another exception is the use of games which are introduced by the teacher primarily for the teaching of number concepts, but which are very attractive to the children and can be effective teaching tools. To be avoided is any kind of number "game" which is actually just drill, and which children do not enjoy. The use of numbers is also required in working in other concept areas such as measurement of length, height, or volume; and many activities teach both.

Occasionally the teacher will want to use concepts of numbers considerably above the child's level to set the framework for further learning. For example, if a child asks, "How many people are there in this town?" or "How many leaves are there on all the trees in the world?" the teacher may answer, "There are lots and lots of people--20,000," or "Millions and millions of leaves--if you counted for the rest of your life, day and night, you couldn't count as far as the number of leaves." Numbers between ten and a hundred can be used naturally in the same way.

Activities for Teaching Numbers and Counting

Large Motor-21	Bean-bags
LM-32	Fish Pond
LM-33	Hammering Nails
Table- 3	Pegboards
T- 9	Sewing Cards
T-22	Sorting Objects
T-25	Letters and Numbers
T-26	Copying Game
T-29	Dominoes
T-30	Board Games
T-31	Box Die and Buttons
T-32	Dice and Washers
T-33	Playing Cards
T-35	Bingo
Language- 7	Finger Plays
L-12	Telephone Book
L-22	Jump Up and Do Something
L-35	Estimating Numbers
L-39	Counting Noises
Miscellaneous- 8	Counting for a Turn
Food- 2	Group Responsibility at Snack Time
F- 3	Counting at Snack Time

Books

Brenner, Barbara; *The Five Pennies*
Francoise, Jeanne; *Marie Counts Her Sheep*
Reiss, John; *Numbers*
Slobodkina, Esphyr; *Caps for Sale*
Thayer, Jane; *The Little House*

TEXTURE

Concept Game for Diagnosis and Teaching

Concepts: Hard-soft, rough-smooth, sticky, fuzzy, fluffy.

Materials: Hard-soft: rock and small piece of sponge; cotton balls and marbles.

Rough-smooth: emery board and popsicle stick; squares of burlap and satin, mounted on cardboard; sandpaper and slick paper or linoleum sample.

Fuzzy: fur, velvet, pipe cleaner.

Sticky: tape or sticky paper. (You may have each child lick a piece of gummed paper and feel it before and after.)

Fluffy: feathers.

Procedure: 1. Present the rock and the sponge to the children and ask, "Which is hard?" and then "Which is soft?" Follow this with the cotton balls and the marbles. Have them feel each item thoroughly, rubbing them on the backs of their hands or their cheeks if they like, and squeezing them in their hands. When it is established whether children can identify these qualities, go on to the others presenting the rough-smooth items in pairs and the fur, tape, and feathers as a group, saying, for example, "Which one is rough?" or "Which one is fluffy?" If the children's interest holds, you may ask several children the same question, alternately asking about one quality and then another, "Mary, can you put your finger on a fuzzy one? Linda, can you find a rough one?"

2. When children seem familiar with all concepts, have them close their eyes as you place one of the objects into a paper bag. Let them feel and describe the object. Ask "How does it feel?" each time trying to get them to use more than one adjective if appropriate. Then ask "What do you think it is?" If guess is correct ask child to take it out and say to the group, "Yes, it is a hard rock." If the child is incorrect, you may ask for other answers first from the child himself and then from the others. It may be necessary to say to the child with hand in bag, "Is it hard or soft?" etc.

Variations and Use as a Teaching Tool:	For young children you may want to use materials for only two contrasting concepts at one time, e.g., hard and soft.

General Suggestions for Teaching About Texture

Unless a teacher has taught a blind child or is herself blind, she probably does not ever make use of the sense of touch nearly as much as she should in helping children to explore their environment. Children can be encouraged to use their fingertips in exploring and appreciating new objects introduced into the room and to think about their texture as well as their color and form. If the teacher commonly uses textural words in her description of things such as commenting on how "slick" the slide is after the children have waxed it, or "the funny bumpy feeling" of a salt painting, children will also begin to think in such terms. They should be encouraged to use their own textural words rather than insisting that they use those which the teacher has introduced. If a child makes up his own word to describe something like a "scritchity" piece of sandpaper or "lump-bumpy" muffin mix, he is learning to think creatively as well as to appreciate this dimension of his world.

By deliberately bringing items into the classroom for children to feel, the teacher can also extend their experiences. The exploring table provides a good place for many kinds of experiences in texture.

Cooking and tasting offer a wide range of differences in texture to be felt by the fingers or in the process of eating. Children can feel macaroni before and after it is cooked or compare the crunchiness of raw apples to the mushiness of cooked ones.

Activities for Teaching About Texture

Large Motor-21	Bean-bags
LM-34	Woodworking
LM-36	Sand Play
LM-40	Making a Mess
Art- 3	Clay
A- 4	Playdough
A- 6	Collages
A-10	Chalk Drawing
A-11	Sidewalk Drawing
A-12	Salt and Glue Painting
A-17	Texture Rubbings
A-18	Vegetable Painting
A-26	Nature Construction
Table-13	Dressing Small Dolls
T-15	Fabric Sample Box
Science-24	Magnifying Glass
S-25	Sea Box, Rock Box
Food- 7	Exploring Foods in Various Forms
F- 8	Real Food in the Housekeeping Corner
F-11	Dip and Taste Foods
F-18	Acorn Squash
F-19	Fruit Salad
F-20	Applesauce
F-23	Peanut Butter
F-28	Frosting Cookies or Crackers
F-29	Rice Krispy Squares
F-31	Jello
Trash to Treasures-40	Exploring Boxes

TEMPERATURE

Concept Game for Diagnosis and Teaching

Concepts: Hot, warm, cool, cold, melting, boiling, evaporating.

Materials: Ice water and ice cubes, thermos of very hot water, styrofoam cups or paper cups suitable for containing hot beverages, thermometer, hot plate, and pan.

Procedure: 1. Pour one cup half-full of ice water and one half-full of hot water. Let each child put his finger into each cup and ask "How does this one feel?" If the teacher does not get a temperature description she might ask, "Does it feel hot or cold?"

2. Using two other cups, mix hot and cold water together to make warm and cool water. Ask the children how they think each would feel and then let each child feel it. If the children do not give the responses of "warm" and "cool" but repeat the terms "hot" and "cold," let them feel the hot one and then the warm one and ask, "Does this feel very hot like the hot water?" Point out that the warm water is "just a little hot" and ask if they know the word for this. If not, tell them that the word "warm" means just a little hot. Repeat the procedure with "cool."

3. Now give each child a cup with differing temperatures and ask, "Who has the cold water?" When a child responds, let the others feel the water in his cup and see if they agree. Repeat with the other temperatures.

Variations and Use as a Teaching Tool: 1. For older children, use a thermometer with a clear, easily read scale. Start heating a mixture of ice and water and let the children take the temperature of cold, cool, warm, and hot water. Finally heat some water to boiling and show the children how high the temperature goes. See if the children know the terms "melting" and "boiling" and what they mean. Continue boiling until the water is gone; explain that the water has gone into the air and use the word "evaporation."

2. If the children seem ready, present an ordering task with five glasses of water varying from very cold to as hot as the children can comfortably touch and see if they can put them in order from hot to cold. Use the term "medium" for the middle glass.

3. Let the children mix their own water using hot and cold to reinforce the temperature concept of warm and cool, and have them tell you what they have made.

Cautions and Suggestions:

1. Encourage children to feel the water with their finger rather than forcing their whole hand in the cup to avoid unnecessary spills.

2. Have ready a large sponge and paper towels.

3. *The teacher should always test the hot water first to avoid burns and alert the children to dangers of touching hot or boiling water or dry ice.*

General Suggestions for Teaching About Temperature

Because changes in termperature and the changes in liquids which accompany them are of continuous and practical importance in everyday life, the teacher hardly needs to set up special situations for teaching about these changes. Rather she should be alert to the educational possibilities of these common experiences.

For the youngest children the teacher uses the words "hot" and "cold" appropriately as she helps them wash their hands; or comments, "We need to put all our warm clothes on today because it's very cold outside," as she helps them into their snowsuits. When mittens are put on the radiators to dry, she can explain to the four-year-olds, "When we put our mittens where it's hot, the heat makes the water evaporate. It goes into the air, just like it did when we boiled water on the hot plate. Then our mittens will be dry and ready to wear again."

Other kinds of similar discussions might include how to dry wet clothes on a warm windy day, where to store crayons in the room (not next to the radiator), what happens to crayons left in the sun, and how we freeze ice cream and what keeps it frozen.

Interest in the heat in the radiators can lead to an expedition to the furnace room to find out where the heat comes from and to a discussion of other things, such as matches, cigarette lighters, the sun, and the bodies of warm-blooded animals, which produce heat. Groups of pictures illustrating hot and cold objects or hot and cold weather can be placed on the bulletin board.

The child's concepts of temperature in relationship to himself can also be explored. Instead of having the teacher decide when coats and jackets are to be worn or left inside, this could be the subject of a group discussion. If a child complains of being too hot or too cold, the teacher can help him to think of possible ways of feeling more comfortable, rather than just telling him what to do. "Where might you be cooler (or warmer)?" (In the shade, in the sun, where the wind blows, or where one is protected from it.) Children can learn to decide on their own when to shed a sweater or run back inside for an extra wrap.

Children who understand number concepts become fascinated with reading thermometers. They can help keep track of the temperature in the fish tank and chicken incubator as well as take part in more planned activities regarding thermometers.

Activities for Teaching About Temperature

Large Motor-11	Outdoor Snow Play
LM-37	Water Play
LM-39	Painting with Water
Science- 5	Forcing Spring Leaves and Flowers
S-13	Weather Report
S-15	Hot and Cold
Social Science- 3	Washing Dolls and Clothes
Food-17	Vegetable Soup
F-18	Acorn Squash
F-20	Applesauce
F-25	Pizza
F-26	Making a Cake
F-31	Jello
F-32	Ice Cream
F-33	Ice Cubes or Fruit Juice Popsicles

PREPOSITIONS

Concept Game for Diagnosis and Teaching

Concepts: Prepositions.

Materials: Small toys (wooden or plastic animals or objects), box (shoe box size or smaller) with lid.

Procedure: 1. Place the box in the center of the table with the lid, open side down, beside it and say, "I am going to hand each of you a toy. Listen very carefully and I will tell you what to do with it." Give the first child an animal (toy) and the instruction, e.g., "Put the cow *in* the box," or "Put the dog *on top of* the box." Continue in the same manner until all children have an opportunity to demonstrate their understanding of several prepositions. Below is a list of suggested prepositions.

Easy	More Difficult
in	in the middle of
on top of	on the edge
on	in the corner
inside	under
near to	underneath
next to	over*
beside	beneath
far from	behind
around*	in front of

*Say, "*Walk* the kitten around (or over) the box."

2. To test ability to verbalize, let each child have a toy and place it wherever he likes, then ask, "What have you done with your toy?" Or the teacher can place an animal and say, "What did I do with it?"

Variations and Use as a Teaching Tool: 1. The teacher may want to use this task as an activity for familiarizing the oldest children to the positional concepts of right side and left side.

2. Use two boxes stacked on one another and say, "Put this one *in* the *lower (upper)* box." etc.

Cautions and Suggestions:

1. To sustain interest, hide the animals in a can or box and reach in to give each child his animal. You may also add interest by varying use of such terms as "gallop around," "jump over," or "hop into."

2. Do not use too many prepositions at any one time. The list used will depend on the maturity of the group.

General Suggestions for Teaching About Prepositions

It has been commented by people learning to speak English as a second language that using prepositions correctly is one of the most difficult things about it. This also seems to be true for some children. The teacher should make a point of using a variety of prepositions in concrete situations where the child can see clearly what she is talking about. She might say, "The doll Yukiko brought to show us is very fragile. I'll put it *on top of* the bookcase where it will be safe." Or, "The guinea pig is hiding *underneath* the papers *in the corner* of his cage." If a child refers to the position of an object in a vague or unclear way, she can rephrase his statement without correcting him. For example, "Where did you leave your sweater?"--"Over there" (pointing)--"Oh, I see it, it's fallen *behind* the bench."

In making use of a variety of exact prepositions in her conversation with the children, the teacher is introducing them not only to new words for their vocabulary but also to greater awareness of spatial relationships. She hopes that children will begin to note the relationship of their bodies to things around them and to see objects in their environment not just as isolated entities but as having positions relative to each other. All kinds of three-dimensional construction activities help children in this regard even when the appropriate prepositions are not used.

Activities for Teaching Prepositions

Almost any activity provides the possibility of teaching one or more prepositions (concepts of position), but only a few are designed to teach a large variety. However, the concept game above, with imaginative variations, is usually popular with the children and can be played over and over. (Use different objects each time.)

Large Motor- 1	Obstacle Course
LM-14	Gymnastics
Language- 6	Puppets
L-21	Listen and Do

Books

Bannon, Laura; *Red Mittens*
Carroll, Ruth; *Where's the Bunny? Where's the Kitty?*

Stories

The Lost Scarf
The Lonesome Little Boy
(See *Storytelling* for the words to these two stories.)

WEIGHT

Concept Game for Diagnosis and Teaching

Concepts: Heavy-light, comparatives.

Materials: Any small interesting articles, preferably chosen to contrast with some other article. Some suggestions: paper wrappers from candy or gum; soup cans, empty and full (preferably with cover to conceal the emptiness); a sponge; a rock the same size as the sponge; feather; piece of wool or thread; a piece of balsa and a heavier piece of wood.

Procedure: 1. Give each child a candy or gum wrapper and ask, "Is it heavy?" When they say "no," ask "What do we call it if it's not heavy?" If you cannot evoke "light," say, "It's not heavy, it's *light.*" Have them repeat "light." (Many preschoolers use "heavy" but not "light.")

2. Pair off the articles collected and give each child a turn to answer "Which one is heavy?" When they answer by choosing the heavy one, ask, "What is this one?" (light) Start with clear contrasts like the cans or the feather and the rock. Then work up to closer comparisons, asking "Which one is heavier? Which one is lighter? By using comparably sized objects (such as full and empty cans or rock and sponge) demonstrate more clearly that size is unrelated to weight. Point out that something can be bigger but lighter.

3. Later test children's use of the words. Presenting the rock or the sponge say, "What is this?"

Variations and Use as a Teaching Tool: 1. Have a larger number of objects to choose from. Ask a child to pick up two and tell you which is heavier and which is lighter.

2. For more advanced children, have them order a series of objects from heavy to light, placing them in a row. You may also use the terms heavy, heavier, heaviest and light, lighter, lightest if the children seem ready for them.

General Suggestions for Teaching About Weight

There are a number of contexts in the nursery school and kindergarten program in which the teacher can introduce concepts of weight. (However, except for the simplest experiences, most three-year-olds are not ready for much exploration of the topic.)

Older children often become interested in how much they weigh themselves, when discussing age, size, or height differences. When this occurs, the teacher can bring into the classroom bathroom scales or doctor's scales, if available, and show the children how they work. Weights of children can then be added to the chart on height; and teachers, volunteers, visiting brothers and sisters, or a visiting baby can be weighed in order to get across the idea that human beings increase in weight with increasing size.

Children often move from this to weighing all kinds of things in the room: blocks, trucks, or dolls. (For this a bathroom scale is easier for the children to use.) At this point they may note that the scales will not weigh everything; if an item is too light it does not register on the scale. This would be a good point at which to introduce a scale for weighing lighter objects, a kitchen scale or a postal scale, or both. It will be interesting for children to find that there are still items, like feathers, which are too light to register even on these scales.

Experiences with food or cooking provide another approach to weight. If children have visited a grocery store and have seen the produce man weigh out potatoes, apples, or another product, a good addition to the grocery store play area is a kitchen scale which the children can use. It is not important whether they are able to read the numbers accurately, but rather that they develop the concept of weighing and that the weight is related to the price which the "shopper" must pay. Older children who can read numbers and who have a concept of pounds and ounces will often be interested in reading the weights on cans, bags of flour, etc., used either in the doll corner or in actual cooking. The teacher might mention that in some countries people weigh ingredients for cooking instead of measuring them, and could provide a recipe made this way.

Interest in writing and mailing letters or packages can give children a chance to see small differences in weight as measured by a postal scale. Many such scales are delicately made, however, and can be used only with close supervision.

One may also teach about weight without using scales. Seesaws, other improvised balances, or a simple pulley arrangement can provide many possibilities for experimenting with weight. The concept that heavy things sink and light things float may be taught at the water table by allowing children to experiment with a variety of things that float and sink. One possibility is to bring objects back from a nature walk and ask the children to predict which ones will float and which ones will sink, and then to try it out.

Other experiences may involve the use of balloons. Bringing a helium-filled and an air-filled balloon into the room and asking the children why one floats to the ceiling and one does not will lead to a discussion of the concept of lighter than air. The concept of air itself may be new to the children.

Because light seems to be a considerably more difficult concept to children than heavy, the teacher needs to find a variety of materials and experiences to clarify the concept for children. (They often confuse this with "light" as from a light bulb.) They might have a special project of looking for light things for a "light and heavy" table. Items listed in the concept game above may be placed on the table with other things, such as balloons, leaves, feathers, pumice stone (if available), various kinds of woods which vary in weight.

The children may also be interested in ordering things by light and heavy, or in playing games in which suitcases or purses are filled with light and heavy things and the children guess before they pick up one whether it will be light or heavy.

Music and dancing activities often provide a possibility for translating the concepts of heavy and light into movement. It might be suggested that the child be a stone and move as though he were very heavy. He might be asked, "When the wind comes along what happens to a feather?" Or children may move being very, very light, changing to being very heavy as they listen to the music.

One tie-in which should be made is that of safety: the fact that heavy objects can hurt and that we need to be careful with them can be raised when appropriate. For example, magnets used in the fishing game are heavy and should not be swung around; shoes are heavy and can hurt, etc.

Activities for Teaching About Weight

Large Motor- 3	Seesaw
LM-12	Pulling Equipment with Ropes
LM-36	Sand Play
LM-37	Water Play
LM-38	Soap Bubbles
Art- 3	Clay
A- 4	Playdough
Table- 8	Paper Punch
T-27	Ordering Cans by Weight
Language-37	Sounds of Containers
L-40	Sounds of Dropped Objects
Science- 9	Measuring Children's Height and Weight
S-10	The Visiting Baby
S-19	Balloons of Different Weights
S-20	Sinking and Floating
S-22	Pulleys
Social Science- 9	Packing Suitcases
SS-11	Grocery Store

Books

Schlein, Miriam; *Heavy Is a Hippopotamus*
Zion, Gene; *All Falling Down*

VOLUME

Concept Game for Diagnosis and Teaching

Concepts: Full, empty, half-full, half-empty, a little, a lot, least, most.

Materials: Small pitcher; rice, corn, or small macaroni; four clear, straight-sided plastic glasses on a tray, one filled with colored water, one half-full, one with a little bit, and one empty. (Use blue water rather than water the color of juice to decrease temptation to drink.)

Procedure: 1. Move the tray from one child to another asking each child to point to the glass that is full, empty, half-full, has a little bit, has a lot, has the least, or that has the most.

2. If the children are able to do this fairly well, empty all the colored water back into the pitcher. Then ask each child to pour one glass full, one half-full and one with a little bit in it. Ask each child to point to the most or the least.

3. Later provide a tray with containers and rice, corn, or small macaroni for pouring, or provide more experience with colored water if adequate supervision is available. Ask children to tell how much they have poured into the glass.

Variations and Use as a Teaching Tool: With mature fours or kindergarteners, the teacher may add, one-quarter full or three-quarters full after the children have mastered the simpler concepts.

Cautions and Suggestions: If there are any problems at all in keeping the group involved in the tasks, better leave part three to a later discussion.

General Suggestions for Teaching About Volume

Only a few activities have been especially designed related to volume, since the concepts involved are relatively easy for children and since two of the most popular activities in school--snack and water play--can give practice. (Note that Volume and Liquid measurement, which follows Volume, are closely related; and the same activities may be used to teach both, depending on each child's level of understanding.) After the Volume concept game has been presented, the teacher can let children pour their own juice; she might say, "Pour just *half* a glass so that we won't spill," or "We don't have very much juice left for seconds, so just take a *quarter* of a glass." Like all practice with concepts, this should not be overdone--certainly not emphasized at every juice time. Similar comments can be made by the teacher if she is a guest at a "tea party" in the doll corner.

Containers for pouring such as pitchers, measuring cups, and plastic glasses make it easy to bring these concepts into water play. The teacher should probably also make a point of using the terms with regard to substances other than liquids, for example, sand in the sandbox, dirt used in potting plants, small toys being returned to their containers, etc., to be sure that children understand that such terms are general ones. One might say for example, "Put more dirt in this pot; it has the *least* in it now," or even, "I wonder which bird has eaten the *most* birdseed.

Activities for Teaching About Volume

Large Motor-36	Sand Play
LM-37	Water Play
LM-39	Painting with Water
Science-15	Hot and Cold
Social Science-12	Restaurant
SS-14	Gas Station
Food- 2	Group Responsibility at Snack Time
F- 9	Picture Recipe
F-20	Applesauce
F-24	Butter
F-26	Cake Making
F-29	Rice Krispy Squares
F-32	Ice Cream

LIQUID MEASUREMENT

Concept Game for Diagnosis and Teaching

Concepts: Cup, quart, gallon, half-gallon, pint.

Materials: 1. Tray; sponges; one measuring cup; one quart container (if cardboard, cut off top to exact quart level); two gallon containers (preferably with wide mouths); funnel (preferably clear plastic); and a small pitcher.

2. For expanding the game: measuring spoons and cups, half-gallon container (milk carton) with top cut off, and a pint measuring cup or milk carton.

Procedure: 1. Bring one of the gallon containers filled with blue colored water. Pour water from this gallon container into the pouring pitcher to be used by the children during the test.

2. Put the measuring cup on the tray and ask the children if they know the name of the item. Try to elicit "measuring cup." Ask one child to fill the measuring cup full of the colored water from the pouring pitcher.

3. Introduce the quart container and ask what we call it. If a milk carton is used, children may refer to it as a quart of milk. If this happens say, "Yes, when this carton is full of milk we say it is a quart of milk. Now we are going to fill it with water and we will have a quart or water." Establish the idea that the quart is larger than the cup. Now ask the children to find out how many cups will fill up the quart. Refill the cup and let the next child pour it into the quart container. As each child pours ask him if the quart is full yet. Continue in the same manner until the quart has been filled with four cups of water. *Count* each time a cup is poured into the quart container.

4. Remove the cup and put the gallon container on the tray. Ask if they know what comes in gallons

(cider and other things we do not drink, like Clorox--emphasize this). Establish the idea that the gallon is much larger than the quart and cup. Using a funnel have a child empty the quart of colored water into the gallon. Now ask "Did one quart fill the gallon?" Fill the quart again from the second gallon container and let the next child pour into the gallon container. Continue in this manner until the gallon is filled.

5. Put the cup, quart, and gallon on the tray again and see if the children can remember the names of the containers.

General Suggestions for Teaching About Liquid Measurement

Teaching about liquid measures will always be preceded by testing and, if necessary, by teaching about volume terms such as "empty" and "full." Many threes and some fours will not yet be ready to remember concepts of cups, quarts, gallons, or fractions. However, even when the teacher does not feel the group is ready to concentrate in this area, she may set the stage by using the measures and the terms in daily activities. This is very easy to do in cooking activities where children will see milk being poured out of quarts and will be using measuring cups themselves to add ingredients. Practice with the concept of gallon can be done in the context of providing juice to take on a picnic or buying a gallon of ice cream for snack time.

Containers of standard sizes such as milk cartons, cider jugs, plastic cups, pint measuring pitchers, and measuring spoons should also be provided at the water play table and in the doll play area during the times that the teacher is emphasizing concepts of liquid measurement. (Perhaps they could then be left permanently in the doll corner, but better play with them at the water play table seems to result if the children have only "measuring" containers at certain times and other types of play items at others.)

One caution has to do with safety. At the same time that the teacher is using cooking projects to teach liquid measurement, she should be sure to emphasize that lots of containers contain things that are dangerous to drink. She may take the children to the cleaning cupboard and show them how gallon and half-gallon containers of cleaning materials are stored high up because they are dangerous. Empty (not previously used) five-gallon gasoline cans can be provided for role playing of gas station or garage with the warning that full cans of gasoline are not to be touched by children. (As with all safety warnings, the teacher should be matter-of-fact and give a simple explanation to avoid either frightening the children or making the substances seem forbidden and intriguing.)

Activities for Teaching About Liquid Measurement

Large Motor-36	Sand Play
LM-37	Water Play
Science-15	Hot and Cold
Social Science-14	Gas Station
Food- 9	Picture Recipe
F-20	Applesauce
F-24	Butter
F-26	Cake Making
F-27	Pancakes
F-29	Rice Crispy Squares
F-30	Instant Pudding
F-31	Jello
F-32	Ice Cream

FRACTIONS

Concept Game for Diagnosis and Teaching

Concepts: Whole, half, thirds, quarters.

Materials: Tray, knife, four apples and four bananas.

Procedure: 1. For four and five-year-olds place four apples on a tray: one whole one, one cut in halves, one in thirds, one in fourths or quarters.

"On this tray are some apples in parts of different sizes. How many apples are there?" Point to each apple as you count "1, 2, 3, 4." Place the tray in front of the first child and ask, "Can you point to the whole apple?" Next child, "Can you point to the apple that is in halves?" Next child, "Can you point to the apple that is in fourths or quarters?" Next, "Can you point to the apple that is in thirds?" (Turn the tray around as you move it and ask in different order.) Repeat going around the group two or three times. Stop at each child long enough to ascertain which ones he can recognize.

2. If children can recognize fractions, then move the tray to the first child, point to an apple and say, "This apple is cut into____. That's right, fourths or quarters, 1, 2, 3, 4." If the child seems ready, point to all four apples before moving on to the next child.

3. Count the children. Cut the whole apple into pieces for eating, discussing what is inside, color, smell, taste, etc.

4. If interest holds, repeat with bananas.

Variations and Use as a Teaching Tool: Place a whole apple and a halved apple, a whole banana and a hlaved banana on a tray as a recognition test for three-year-olds.

Cautions and Suggestions: Do not try the whole task with children unless you know they have number concepts up to ten (see below).

General Suggestions for Teaching Concepts of Fractions

Teaching with three-year-olds should be limited to the concepts of whole and half. With fours the teacher should not go on to other fractional concepts until testing with the number tasks shows that children are familiar with number concepts up to ten. (This means not just being able to count to ten by rote, but actually relating numbers to objects.) Even then some children may have considerable difficulty with fractions, and the teacher should proceed slowly.

On the other hand, when children seem to be able to handle the idea of one fourth or one third easily, it is possible to go on to addition concepts such as "two fourths make one half" or to such fractions as one eighth or one tenth. *At this level, experiences with fractional parts must always be in the context of something concrete such as pieces of fruit, or cut up circles on the flannelboard.* Even considerably older children have difficulty dealing with fractions in the abstract. One caution related to future learning is that the teacher should make clear that a fraction always relates to *equal* parts--that just dividing something into four parts, for example, does not make those parts "fourths."

As with so many other concepts, cooking projects and snack time provide opportunities to teach about fractions. A child who has the chance to add a half cup of sugar or a quarter teaspoon of salt to cake batter one week, and one cup of oil or a quarter cup of vinegar to make salad dressing the next week, will soon have these concepts permanently in mind.

Whether work with fractions precedes or follows work with liquid measurement and volume, use of measuring pitchers for pouring juice at snack time can teach in all three areas. For example, teachers can tell children, "You may have half a cup for seconds." Halves and quarters may be introduced by providing cut up cookies for seconds or by a very special treat from the bakery , "halfmoon

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cookies." If children are advanced in this area, all the cookies could be presented in halves; and the children could be told, "Today we can each have two and a half. How many halves do you take to make two and a half?" Similar kinds of play can be encouraged in the doll corner or when children are using cooky cutters and knives with clay or playdough, if the children are interested.

Building with unit blocks and putting them away is also good for basic learning of fractions. Children can see concretely that two half-blocks make a unit, etc. This is discussed more fully under *Blocks* in the activity section of this manual.

As with all concepts the teacher can help by occasionally using these terms in her conversation, as appropriate. To a child climbing the rope she might say, "You're almost halfway up"; or to three children sharing in "licking" a cooking bowl, "I'll draw lines between your parts so you'll each have one third to scrape with your spoon."

Activities for Teaching Fractions

Large Motor-35	Blocks
Art- 3	Clay
A- 4	Playdough
A-15	Paint Blots from Folded Paper
A-16	Rulers and Triangles
Food-12	Buttering Bread and Crackers
F-14	Eggs
F-15	Cutting up Fruits and Vegetables
F-19	Fruit Salad

LINEAR MEASUREMENT

Concept Game for Diagnosis and Teaching

Concepts:	Measurement, yards, feet.
Materials:	Ruler (foot), yardstick, tape measure (longer than one yard), two strips of brown wrapping paper (one 1' x 5' and one 2' x 6'), markers or crayons.

Procedure:

1. On the smaller strip of paper, draw a one-foot line, a three-foot line and a four-foot line with three different colors of magic markers. Tape this paper to the wall and show the children first the ruler, then the yardstick, and then the tape measure, asking in each case what it is and what it is used for. Try to determine whether the children understand the concept of measuring as well as the names.

2. If the children do not understand the use of the tools, say, "When we want to measure something to see how long or tall it is, we can use these things to measure with. We are going to measure some lines today. This is a ruler and it can measure a line this long. We call this a foot. If the line is still longer we use this (hold up yard). We call it a yardstick. If the line is even longer than the yardstick can measure, we use this (hold and demonstrate tape measure). We call it a tape measure."

3. Now have the children look at the lines drawn on brown paper. Say, "Let's look at the first line on this sheet of paper. It is a red line and it is this long. (Run your finger along the line.) Would we measure this line with the ruler, yardstick, or tape measure?" Establish the idea that the line is exactly a foot long and show the children how to set the ruler along side the line to measure it. Continue in the same manner with the line lengths measured by the yardstick and tape measure. The idea that the tape measure can measure both long and short lines should be encouraged.

4. Now tape up a second brown paper having several examples in different colors of different lengths of lines, and let each child have an opportunity to choose the unit of measure that he thinks will measure each line exactly. The color of each line

should be varied so the line can be identified by a name (i.e., "John, what do you think you would use to measure this blue line exactly, the ruler, the yardstick, or the tape measure?") Continue in the same manner until all children have had a chance to measure the lines.

Variations and Use as a Teaching Tool:

1. Help the children by holding the different measures and let them use a crayon to draw their own lines on a strip of brown paper.

2. Some kindergarten children may be ready to measure in inches as well as exact feet and yards. To test this provide another sheet with lines of many different lengths for measuring.

General Suggestions for Teaching About Linear Measurement

For four-year-olds, our major interest is to teach the basic concept that length, width, and height are measured by using rulers, yardsticks, or tape measures and to introduce them to the terms "inch," "foot," and "yard." We would not, however, expect them to actually carry out the measurement process until they are quite clear on their number concepts, which may not happen before kindergarten. However, the groundwork can be laid by bringing measurement into naturally occurring situations, first having the child simply hold the ruler, yardstick, or one end of the tape measure while the teacher reads off the inches, feet, or yards. This should always be done when it serves some practical purpose such as finding out how much rope is needed to rig a pulley, measuring for a new bulletin board, or measuring children for a height chart.

Later, wide, homemade measuring sticks which have dots that can be counted at each inch mark, as well as the numerals, can teach both measurement and number concepts. When the children master the process of doing the actual measurement themselves, they often begin enthusiastically to measure everything in sight; and the teacher can help by providing a sheet where this information can be recorded. As with most activities additional concepts can be stressed at the same time. For example, measuring shadows at different times of day leads to discussion of the simplest trigonometric relationships; measurement of a doll and a guinea pig, to interpretation of the relationship of growth to life. Measurement of the rain or snow in the weather station can lead to discussion of the plants' need for water in order to survive.

If it can be done without introducing a competitive element, children may wish to measure and record how far they can jump or hop and try to improve their own record from previous days.

Activities for Teaching Linear Measurement

Large Motor- 4	Walk on the Line
LM-16	Shadow Play
Art-16	Rulers and Triangles
A-33	Toy Money
A-36	Footprints and Handprints
Science- 2	Measuring Plant Growth
S- 9	Measuring Children's Height and Weight
S-10	Visiting Baby

Books

Lionni, Leo; *Inch by Inch*

WAYS OF MOVING

Concept Game for Diagnosis and Teaching

Concepts: Hop, crawl, fly, jump, walk, run, swim; fast and slow.

Materials: Set of miniature animals, hand puppets, or animal pictures (cut out and mounted on cardboard).

Procedure: Using the animal miniatures, hand puppets, or pictures say, "I am going to show you some animals today, and I want you to help me make them move." Hold up the rabbit and ask one child the name of the animal and how the animal moves. Once the answer "hop" is elicited, demonstrate the movement and say, "This is a bunny rabbit and he moves by hopping." Children can be encouraged to imitate the hopping movement with their hands. Continue with the other animals in the same manner, giving each child a turn. Discuss the movement as being either fast or slow. (Use both "fast" and "quickly" and tell the children they mean the same thing.)

Rabbit	hop; quickly
Turtle	crawl; slowly
Bird	fly; quickly
Kangaroo	jump; quickly
Dog, horse, cat	walk, run; fast and slow
Fish	swim; fast and slow

Variations and Use as a Teaching Tool:

1. Put a set of cards of many different animals who move in different ways in front of the children. Start with a movement such as crawling and ask the children to find all of the animals that crawl. Continue in the same manner with the other movements.

2. Show some pictures of animals and ask an individual child to choose an animal and then to move like the animal. Let the other children guess what animal he is imitating.

General Suggestions for Teaching About Ways of Moving

The teacher should use words describing movement in a meaningful and creative way in her daily conversation with children. While the concept game has tied characteristics of moving to ways in which animals move, this is only one way of looking at movement. She should be aware of qualities of movement in inanimate objects as well as in the children themselves or in animals. Thus, in addition to saying, "It's fun to whirl when you're dancing," or "Stamping your feet makes the snow fall off your boots, doesn't it?" the teacher can also talk about the "swirling" batter as the cake is mixed or the "fluttering" of the flag in the school yard.

Many games can be modified to focus on types of movement, such as obstable courses, Listen and Do, and an animal pretend game in which a child is told by the teacher to pretend to be an animal and the other children guess what animal he is. (See the specific activities suggested below.) Children should particularly be encouraged to explore kinds of movement at music time. They can be asked, "How does this music make you feel like moving?" and should be free to show or tell the teacher, or both. However, the teacher should never be so concerned about developing language that the creative and spontaneous movement of children is limited.

If a teacher has access to a movie camera, one of the most effective ways of helping children to look at movement is to take pictures of them as they play, either just in free play or when children are dancing or playing animal movement games, and then to show the children their film and have them comment on what they are doing.

The bulletin board can be divided into sections where the teacher and the children put pictures of things that crawl, run, etc. or pictures of slow and fast things. The oldest children may be interested in relative speeds and may want to look up in books and perhaps make a chart showing how fast certain animals can run or how fast cars, airplaines, and rockets can go. (However, one would expect difficulty with the concept "miles per hour.")

Activities for Teaching About Ways of Moving

Large Motor- 1	Obstacle Course
LM- 2	Balance Beam
LM- 4	Walk on the Line
LM- 7	Jumping
LM-13	Stunt Mat
LM-14	Gymnastics
LM-15	Move as the Animals Move
LM-16	Shadow Play
LM-22	Ball Play
Language-21	Listen and Do
Science- 6	Animals in the Classroom
S-10	Visiting Baby
Miscellaneous- 4	Movies in the Classroom

Books

Spier, Peter; *Fast-Slow, High-Low*

TASTES

Concept Game for Diagnosis and Teaching

Concepts: Sweet, sour, salty, spicy.

Materials: Small paper cups (two-ounce) for holding items to be tasted; small paper, plastic, or wooden spoons to be used by the children for tasting; and foods that taste sour, sweet, salty, and spicy. Suggested items for tasting include: sour--lemon, pickle, lemon juice; sweet--sweet chocolate, sweetened cocoa, sugared cereal, sugar, orange sections; salty--salt, potato chips, pretzels; and spicy--powdered cinnamon.

Procedure: 1. Tell the children they are going to get to taste many things you have brought for them and show them the little paper cups. Ask "What do we taste with?" If you do not get the name "tongue," ask them to point to the part of their body that helps them to taste and label it for them.

2. It is most ineresting to start with sugar and salt, which look alike yet have definite taste differences. Give each child a small portion of sugar on his individual spoon and ask him "How does this taste?" If none of the children volunteer "sweet" suggest, "Does it taste sweet?" If they are familiar with the word (most threes are,) they will answer, "Yes." Now show them the salt and ask them to guess how it will taste. They will be quite surprised when they taste it. Follow this with a discussion of how you can't tell how something will taste until you have tried it, i.e., both look alike but taste different. Repeat the words "sweet" and "salty." Then give each a big piece of candy and a potato chip and ask how they taste.

3. Repeat the procedure with juice squeezed from a lemon and suggest the word "sour." Contrast with other juice squeezed from an orange to reinforce the differences between sweet and sour.

4. For a surprise ending, try cinnamon. Many children will call this "hot." Also introduce the word "spicy."

5. When children have been introduced to all the terms, see if they can describe the pickles, sugared cereal, and pretzels by tasting with eyes shut.

Cautions and Suggestions:

1. Encourage the children to taste and label their tastes, but also be very certain that your children understand that not all things are safe to taste without knowing what they are. They should know not to taste anything unless their mothers or teacher say it is all right. Medicines, cleaning agents, and many other things found around the home are often poisonous and are very dangerous. Help your children become aware of these dangers. It would be best to alert the mothers to emphasizing this at home at this particular time.

2. Some children don't want to try new things and should not be pushed. In all cases tell them just to take a little.

3. Many will have difficulty learning words other than "sweet." Do not push game beyond interest, but teach further with suggested activities.

General Suggestions for Teaching About Taste

For the teacher who can be creative and also stretch her food budget just a little to include more variety than the traditional juice and crackers, snack provides an ideal time to give the children all kinds of taste concepts and at the same time to help them to accept a broader range of foods than they may have experienced at home. In an all-day program, lunchtime offers even more extensive opportunities. In the kindergarten, where the teacher often has no budget for such extras, mothers might be asked to help enrich the program by bringing something particular on a given day.

For example, the children might be given two kinds of apples, one sweeter than the other. On other days snack might include small pieces of pickle, very salty crackers, or applesauce with cinnamon. Perhaps instead of the traditional snack one day, there could be a "smorgasboard" with tiny pieces of many kinds of food to sample and talk about. Then in addition to the basic concepts of sweet, sour, salty, bitter, and spicy the children may be encouraged to try to recognize more subtle flavors. For example, for a special treat, the children might have ice cream which looked like vanilla, but was actually lemon flavored; or they could have ginger cookies a few days after they had gingerbread to see if they could identify the flavor. Children themselves might occasionally bring something from home to see if the others could guess the ingredients. The aim is not to make little gourmets out of five-year-olds, but as with so many other areas of teaching, to help them to become aware of and enthusiastic about another part of their lives.

Activities for Teaching About Taste

Almost any of the activities listed under *Food Preparation* may be used for teaching about taste, as well as any other food experiences which the teacher cares to bring into the classroom. (For a complete list of food activities, see the *Activity Index*.)

LINE QUALITY

Concept Game for Diagnosis and Teaching

Concepts: Straight, curved, parallel, and perpendicular lines; and angles.

Materials: Large sheets of paper; bright colored magic marker; and cards, approximately 3" x 3" with lines drawn on them.

Procedure: For procedure one, each child has an identical set of cards including an example of each type of line listed above. For procedure two each child also has an example of a straight line drawn differently on each card.

1. The teacher says, "Now we are going to look at some different lines." She draws with her magic marker a single line which is identical to one line which the children have on their cards. She says, "Here is a straight line all by itself, can you find one just like it in your cards?" When all of the children have done so she says, "Now here is a curved line, can you find one like it? Then two straight lines that go along together? We call these parallel lines. Then two lines that go in different directions? We call these perpendicular because the two lines make a square corner with each other. And then here are two lines that come together. We call this an angle." In each case she has the children match their picture to the one she draws.

To prevent the children from simply handing the final card in without looking at it, the teacher should draw a circle before she draws the final matching line and if a child starts to hand her his remaining card, say, "Look carefully, is that the same?" Children usually think this is funny and the teacher may say, "I fooled you, didn't I?"

2. If the children are all able to match identical sets of lines, the teacher goes to the matching of non-identical sets. She holds up a card with a straight line on it and says, "Here is a card with a straight line all by itself. See if you have a card with a straight line all by itself. Your line

may be short, or fat, or drawn in a different place; but it will still be one straight line." She then has the children put out their straight lines. The procedure is then the same for each type of line.

Variations and Use as a Teaching Tool:

1. After the children have learned to match non-identical kinds of lines, each child can be given a piece of paper and a pencil and asked to draw the lines as the teacher draws them. Thus, the teacher will say, "I'm going to draw a straight line, draw a straight line like mine on your paper." The concepts of thick and thin can also be added for the most mature children by saying, "Draw me a thick straight line," or "Draw me a thin curving line."

2. While most children must not be expected to use words other than "straight" or "curved" correctly, if the teacher finds that the children are sufficiently advanced and interested to want to use the other words, she can play the above variation by saying to the children without illustrating, "Now everyone draw a curved line," or "Everyone draw parallel lines." This variation, however, will probably only be appropriate with the most mature children in the four-year-old group or kindergarten.

3. As a teaching tool or game, decks of cards showing a wide variety of forms of angles, parallel lines, curved lines, etc., can be used. The children can sit by themselves and sort the cards and match them. Or the teacher can help them play a simple card game in which each child is given one form of line on a single card; and then as the teacher deals out the cards, each child claims the cards which belong with the one that he has. It is not necessary to play it as a game to be won; the children will simply enjoy claiming the cards which belong to their deck as the teacher goes through them.

4. Draw it with your hands. As the teacher draws the line or says the word, she has the children trace it in the air with their hands.

General Suggestions for Teaching About Line Quality

We are more interested in having children learn to think about and observe the characteristic of line quality than we are concerned that they learn all of the words involved. "Straight" and "curved" can easily become part of their vocabulary; but "angle," "perpendicular," and "parallel" are not so important. The teacher, however, can use these terms whenever they are appropriate. There are a number of activities in which the teacher can easily use the terms in directions or can use them to describe what the children are doing. For example, when a child is walking a chalk line; the teacher can say, "Here's a corner that makes a sharp angle; can you get around it without falling off?" In looking at the design that a child has made with nails and loops the teacher might trace the lines with her finger and say, "You have made a lot of parallel lines, haven't you?" Or in looking at the painting done by a four-year-old she could say, "I like the way that your straight and curved lines come together." But as in any creative situation, the teacher should make such comments only when he is finished, or is looking for someone else to be interested in what he is doing, never as an interruption or an imposition of the teacher's ideas on the work of art. Except in the Line Quality game when children may want to make the lines themselves, it is neither necessary nor desirable to set children the task of producing certain line qualities in their artwork.

Children may enjoy using rulers and triangles or tracing around any objects they find in the classroom and then talking about the kinds of lines or shapes they have produced.

The teacher can encourage children to explore the effects of various kinds of line weight (thickness and thinness) as well as the relationships of lines to each other, by providing brushes of differing widths at the easel, by providing varying sizes of magic markers with paper, and perhaps for the oldest children, by providing pencils in varying thicknesses and degrees of softness (introducing in the latter case the concept of differing hardness and softness of pencil leads). If children become interested in this aspect of lines, it might be interesting to bring into the room some Japanese or Chinese brush-and-ink pictures or calligraphy.

Activities for Teaching About Line Quality

Large Motor- 4	Walk on the Line
Art- 1	Tempera Paint
A- 2	Crayons
A- 7	Blackboard
A- 8	Magic Markers
A- 9	Finger Painting
A-10	Chalk Drawing
A-11	Sidewalk Drawing
A-12	Salt and Glue Painting
A-14	Starter Pictures
A-16	Rulers and Triangles
A-21	Wax Paper Pictures
Table- 3	Pegboards
T- 5	Plastic Lacing

Books

Amoss, Berthe; *By the Sea*
Charlip, Remy; *Where Is Everybody?*
Johnson, Crockett; *Harold and the Purple Crayon*
Piers, Helen; *Snail and Caterpillar*

THREE-DIMENSIONAL FORM

Concept Game for Diagnosis and Teaching

Concepts: Sphere, cube, cone, cylinder.

Materials: Forms from school or scientific catalogues may be purchased (these may be expensive), or the teacher can use the items listed below.

Spheres: Two each of tennis balls, baseballs, ping-pong balls, marbles, and round beads.

Cubes: Two each of boxes of various sizes which are true cubes, or cubes folded from heavy paper, cubes found in block sets and cubical beads.

Cones: Two each of various sizes and proportions made from heavy paper and filled with clay or plaster of Paris, ice cream cones, cone shaped paper cups, and styrofoam cones.

Cylinders: Two each, made from paper or cans of various sizes, cylinders found in block sets or cut from dowels, and cylindrical beads.

Procedure: 1. Have all objects on a tray which can be moved in front of each child at his turn. Give each child, one at a time, an object and ask him to find one which is exactly like it. Say, "Here is a cone, can you find one that is just like it?" Proceed in this way, with each child at the table, in each case using the words "cone," "cube," "sphere," or "cylinder." If the child picks up an object which is not the same form say, "No, that's not a cone, that's a cube. Can you find a cone that's just like the one you have?" If the child picks up another form which is the same but is not the same in size, say, "Yes, that's another cone, but it is not exactly the same. Can you find me one that is just the same?"

2. When it is clear that children can match identical forms, say, "Now we are going to play a different way. Can you find me a cone which is a different size from this one?" Give each child a chance to pick out several forms.

Cautions and Suggestions: This is definitely an area in which the actual names of the objects are not particularly important for the children to learn. Thus, the game is taught only as a matching game with the idea of helping children to become sensitive to three-dimensional form and to be aware that forms do have names. Because they will rarely need these names in day-to-day contacts with others, the actual memorizing of the names can wait until grade school.

General Suggestions for Teaching About Three-Dimensional Form

The main focus in looking at three-dimensional form is to help children to be conscious of and interested in this aspect of objects. The teacher can use the correct names of geometrical forms in talking about them, but should not push the children to do so. While the word "cone" is familiar to most because of experience with ice cream cones, they will not ordinarily learn to use the words "sphere," "cube," and "cylinder."

Sensitivity to form can be increased in many ways. One way is to provide activities for matching three-dimensional forms such as sorting macaroni or nuts or stringing beads. In many informal situations in the classroom the teacher will have occasion to call the children's attention to matching forms. For example, when the children are using tires, she might ask them what the inner tube form looks like, and might bring in doughnuts for juice time the same day to illustrate the comparison; or when children are crawling through a tunnel, she could point out that the tunnel is a cylinder like an orange juice can except that both ends are cut out of a tunnel.

A second approach is simply to let the children see that forms can be beautiful just as colors are beautiful. We want to be sure that we help children to think about the qualities of forms in everyday life--many of which cannot be given names but can be enjoyed. This can be done just by bringing in or commenting on interesting forms from nature such as rocks or pieces of driftwood or man-made objects which are beautiful shapes--a vase for flowers or a particularly nice bottle. These should be objects which children can touch as well as look at. Few schools can afford the new "play sculpture," but the teacher may be able to borrow a piece of (safe and durable) abstract sculpture for a few days or could take the children to an exhibit of sculpture. If children are interested and reasonably trustworthy, it might be possible to take a small group to see a potter working at a potter's wheel.

Third, children learn to appreciate form through freedom in producing it themselves. Many three-dimensional creative activities such as clay, playdough, and styrofoam sculpture give children the opportunity to visualize and work in three dimensions. While the teacher can make occasional comments about the names of forms being used, this should not be allowed to interrupt or distract the children from the much more important task of learning about form through actually working with it.

Activities for Teaching About Three-Dimensional Form

Art- 3	Clay
A- 4	Play Dough
A-26	Nature Construction
A-27	Styrofoam Sculpture
A-28	Wood Sculpture
Table- 4	String Objects
T-17	Matching Pictures to Objects
T-18	Matching Outlines and 3-D Shapes
T-22	Sorting Objects
Science-25	Sea Box, Rock Box
Food-22	Cracking Nuts
Trash to Treasures-43	Shape Box

PATTERNS

Concept Game for Diagnosis and Teaching

Concepts:	Dots, prints, stripes, plaids, checks, plain.
Materials:	Prepare a different set of samples of each pattern for each child with swatches of varying sizes and colors of dots, stripes, checks, plaids, and different plain and solid colors. Cut samples of fabrics 3" x 5" and staple to cards or fasten to sandpaper.
Procedure:	1. Put all samples of each type of pattern in a separate envelope. Have ready a small flannelboard, pieces of construction paper, or trays (shallow box tops) that children can see easily, to set the fabric samples on as you ask for them. (If you use a flannelboard, fabrics must be backed with sandpaper.)

2. Say to the children, "We are going to talk about patterns such as dots or spots, stripes, plaids, prints, checks, and plain or solid colors." Pass out the fabrics, one at a time, putting them face down. When all five are passed around, say, "Turn the cards over and arrange them in any way so that you can see them clearly." Check to see that all children do this, each child's cards separated from his neighbor's. "Now look at the patterns and give me the one that has dots or spots." Place the cards on flannelboard or box cover in a group where the children can see them clearly. Then ask for stipes, checks, plaids, and prints; and finally the plain or solid is left. Ask, "What do you have left? Is it dotted or spotted? Is it striped? Is it checked? Is it plaid? This one is called 'plain' or 'solid color'." (A child *may* name it without your asking these questions.) Some children may look to see what other children are handing you and thus *match* rather than *recognize* during this procedure.

3. Next, hold up the groups of samples. With three-year-olds ask each child to point to the pattern which you name. With fours point to a pattern group and ask the child if he can tell you its name. For fours who appear unable to tell you the name of the pattern, try having them point to the pattern you name. It is important to be sure that the dots are grouped distinctly from the stripes, etc. It may be

better not to put the checks and plaids next to each other unless discussing the differences. "Stripes are lines going one way, across or up and down. Checks have lines going up and down and across, making squares and have just two colors. Plaids have lots of colors with lines going across and up and down." Enunciate clearly the difference between plain and plaid.

Ask the children to name the patterns as you put them away, saying "Good-by checks, good-by plaids," etc.

Variations and Use as a Teaching Tool: Even if the teacher feels that names of patterns are not basic information, this is an excellent game for practice of visual discrimination; and most children enjoy it.

Cautions and Suggestions: Because the authors could not decide whether there is, in fact, any real distinction between dots and spots, the latter was not included as a separate pattern. Teachers may have a similar problem with checks and plaids when it comes down to an exact definition; it is certainly not worthwhile to spend time on this distinction if children seem to be confused.

General Suggestions for Teaching About Patterns

The ability to name dots, plaids, etc. is hardly an essential part of the preschool child's learning. However, it has been included for three reasons. First, it provides one more way to test and teach perceptual discrimination. Children, especially those with problems in this area, need many opportunities for practice in making comparisons between patterns or forms. The more that different ways are used to present these opportunities, the less likely are the children to lose their motivation for such practice.

Second, having children think about the differences between and the names for patterns is just one more step in teaching them a general sensitivity to and awareness of their environment.

Third, fabric patterns, though a relatively minor part of the child's environment, are always present. Further, most children are *very* interested in all aspects of clothing--as teachers know who have taught colors by having children look at their clothing. We have found that they are equally interested in observing and discussing the textures and patterns of their shirts, dresses, or pants.

Thus, in teaching about patterns the teacher has a tool for also teaching perceptual discrimination, giving heightened sensitivity to the world, helping develop interaction among children, and providing a setting for production of language.

If the teacher has played the Patterns concept game with the children, she has introduced the vocabulary of pattern. Then she simply gives them further experiences with the terms through informal comments on their clothing and through songs, guessing games, and other activities used ordinarily for teaching color. For example, she can sing "Mary has a plaid dress" or play "I'm thinking about someone who is wearing a striped shirt." There are also many ways of using patterns in the classroom; some are listed below as specific activities. Or the teacher can just use her imagination. She might have a pattern bulletin board, for example, or squares of patterned cloth for the center of the snack table.

If the pattern concept game is not played first, the same kinds of experiences can be used; but the teacher will need to demonstrate at first by pointing to a pattern as she talks about it, since many children may not have heard these words before.

Activities for Teaching About Patterns

Large Motor-21	Bean-bags
Art-18	Vegetable Painting
A-22	Printing with Objects
A-24	Paper and Cloth Dyeing
A-25	Tie Dyeing
Table-12	Sweet Patootie Doll
T-13	Dressing Small Dolls
T-15	Fabric Sample Box
T-26	Copying Game

Stories

Polka Dot Paint Story
Lonesome Little Boy
(See *Storytelling* for the words to these stories.)

"INFORMATIONAL" CONCEPT GAMES

The games which follow differ from the previous set in that they deal, not with qualities such as position or color, but rather with information about objects which goes beyond physical characteristics. Much of the information which we are testing in this group of tasks is simply a question of vocabulary--giving the names of things; but there are also questions about how things work, what they are made of, and what they are for.

The most important way in which the two kinds of games vary, however, is in the way in which the information gained from them should be used in teaching. With the *qualitative* concept games it is relatively easy to explore the total range of a child's or group's knowledge of a given concept. In the concept game on weight, for example, we only want to know whether a child can distinguish differences in weight and whether he knows the words "light" and "heavy." Once a teacher knows that he does not, she can focus her teaching on these specifics. In the *informational* concept games. however, we are looking at areas where we cannot possibly test everything that a group might know or should know. All a teacher can do is to take a very small *sample* of the group's knowledge in a given area and hope that this sample gives her a fairly accurate idea of where more experiences are needed. Then she can try to teach many things which have not been asked about in the concept game.

For example, in the concept game on animals we look at the children's knowledge of the names of a sample of animals, where they live (in a very general way,) and the uses of a few domestic animals. Obviously we have not even touched on such topics as the life cycle of each animal--what they eat, exactly where they live, etc.
When the teacher begins to provide learning experiences about animals, she will want to go into many such aspects not covered by the test. Further, since she cannot possibly give the children all the information on animals which is appropriate to their level of understanding, she is going to have to select those concepts which she feels

are most important to her particular children or which fit best into her program for other reasons. Such selective choice of material to be covered will be necessary in all the informational areas.

BODY PARTS

Concept Game for Diagnosis and Teaching[4]

Concepts: Parts of the body.

Materials: None

Procedure: 1. Have the children stand in a semi-circle around the teacher, and say, "Point to your eyes; point to your ears; etc." Start with easy parts and follow with less well known words such as ankle, knee, wrist, etc. If the children start to get bored, or if something is not easy to point to, try variations like "wiggle your fingers," or "walk your fingers up your arm."

2. If many of the children are able to point to (recognize) most body parts correctly, their ability to name parts can be checked by the teacher's pointing to one part of herself and saying, "Jimmy, point to this! What is it?" proceeding around the group as long as interest holds.

Variations and Use as a Teaching Tool: If there is a considerable difference in knowledge in the group, the teacher can combine identifying and naming in the same game, saying "Jose, point to this; what it is?" and then, "Maria, put your finger on your chin."

Cautions and Suggestions: Do not try to look at too many words in one session. Children will play this game over and over if the teacher stops while they are still enjoying it, and it can be a very effective teaching tool.

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[4] For testing children individually on their knowledge of body parts, see *Individual Testing Session.*

General Suggestions for Teaching About Body Parts

Since many three-year-olds already know the names of the most common parts of the body, the learning of the other names is ordinarily not very difficult and does not require much time. (On the other hand, some very young children or those from an extremely non-verbal background may not know the terms "arm," "leg," "back," etc.) The teacher can use the concept game and its variations to teach concepts such as elbow, neck, or ankle to children who already know the more familiar terms, while teaching the concepts of nose, arm, leg, etc. to other children. If, however, one or two children are considerably behind the others, the teacher or a volunteer may sit with them and play labeling games with pictures in a book, with a favorite doll, or with the child himself. Sometimes very immature or shy children respond better to looking into a mirror while pointing to a part of the body.

The teacher should also be sure to be very precise when she uses these words in ordinary conversation. "You have some paint on your cheek," rather than "on your face," or "Did you bump your toe?" rather than "your foot."

Children are often interested in comparing the body parts of animals to their own--something adults take for granted. When an animal is brought into the classroom, the teacher may comment that its four legs are similar to the two arms and two legs of a person, or encourage children to consider how its eyes or ears are different from ours. A three-year-old may be fascinated by the discovery that he does not himself have a tail and wonder why. (This might lead to animal play in which the teacher provides fabric tails appropriate to various animals.)

Children who know the names of body parts are often very vague as to the internal structure of the body or the use of the senses. Because in pre-testing so few children were found who had much information in this area, a teaching activity has been devised instead of including it in the concept game on body parts. (See *Functions of the Body.*) It is probably not appropriate to try this activity with other than mature fours and fives.

In relationship to body functioning teachers should anticipate, whether they set out to teach in this area or not, that they will have some questions related to sex education. It is well to be prepared by deciding ahead of time whether to handle such questions by direct answers or by referring children to their parents. This will depend on the teacher's own feelings of comfort or discomfort in this area and the kind of parents with whom she is working.

Activities for Teaching About Body Parts

Large Motor-14	Gymnastics
LM-16	Shadow Play
Art-34	Tracing Around Children's Bodies
A-35	Face Picture
A-36	Footprints and Handprints
Table-12	Sweet Patootie Doll
Language-14	Mirrors
L-15	Movable Man
Science- 6	Animals in the Classroom
S-12	Functions of the Body
Social Science- 3	Washing Dolls

Books

(The first two may be out of print, but look for them at the library.)

Phoebe; *Noses Are for Roses* (Out of print; try library.)
Rodolph, Marguerita; *Look at Me*
Slobodkina, Esphyr; *Caps for Sale*

Story

The Little Girl who Liked Bracelets
(See *Storytelling* for the words.)

FAMILY MEMBERS

Concept Game for Diagnosis and Teaching

Concepts: Family members, names of family members, older, younger.

Materials: Pictures or figures of family members including grandfather, grandmother, father, mother, girl, boy, and baby. These can be flannelboard figures from a school supply catalogue, figures from a block family, or pictures cut from magazines and glued on tagboard.

Procedure: 1. If using the flannelboard, hide the members of the family behind the board; or hide the block family in your lap. Tell the children the flannelboard is a house and inside there are members of a family. Say, "Here comes someone out of the house. Who is it, Betty?" (Take the baby from behind the house and put it on the flannelboard.) "Now someone is going to come out and take care of the baby. Who is it, James?" Continue in the same manner until baby, little girl, mother, and grandmother have come out of the house.

2. Now ask, "Who is the oldest person here, Alice? That's right, Grandmother is the oldest one. Who is the youngest? That's right, the baby. Is there anyone in this house who is older than the baby?" Then follow with a series of questions such as, "Who is older than mother? Who is younger than grandmother? Who is younger than the little girl? Who is younger than mother?" Continue until you have determined how well children understand age concepts.

3. Repeat procedure either immediately or on another day using the four male figures.

Variations and Use as a Teaching Tool: 1. The same procedure can be used to test or teach size concepts, and it is often helpful to combine this with age concepts to be sure that children know that the largest person is not always the oldest.

2. The block figures or figures cut from magazines can also be used by the children to act out family play themselves; or they can tell the teacher a story while she moves the flannelboard figures about. (The commercial flannelboard figures are both too tragile and too expensive to let children manipulate them.)

Cautions and Suggestions:

1. The more animated the teacher is in telling the story of the family, the more enthusiastic are the reactions of the children.

2. When testing young three-year-olds for knowledge or relative age, the family members might need to be limited to only two members at any one time.

3. The teacher should be aware that any of the family members, especially the grandmother or grandfather, might not look enough like the members of the child's own family for him to be able to label correctly.

4. The idea that some families are different (some do not have babies, fathers, grandmothers, etc.) should be discussed in a very matter-of-fact way to avoid giving any child the feeling that his family is in any way inadequate. The teacher should be careful not to encourage the idea of a stereotyped middle-class family, but should accept and encourage discussion and ideas relating to the families of the group.

General Suggestions for Teaching About Family Members

A young child often perceives his family only in relationship to himself and has difficulty in understanding their relationships to each other or in grasping roles which do not occur in his own family. Thus a child often refers to the husband of a teacher as "your father" or may be unable to understand that his mother also has a mother. Age differences also provide problems since children frequently confuse age and size.

The simplest way to expand a child's role concepts is by giving him experiences relative to real people or to interesting characters in stories and books. A teacher can encourage grandparents, mothers and fathers, brothers and sisters to visit the classroom while explaining to the children who they are. Thus she might say, "This is Jimmy's older brother. He is ten years old," or "This is Rhoda's grandmother. She is Rhoda's mother's mother."

Many good books can be found which introduce characters in terms of their family relationships, some of which stress the age aspects and others the emotional ones. (See the list below.) As noted in the concept game itself, the teacher should be very careful to avoid presenting the stereotyped middle-class family as the norm, rather stressing that families are different--some have babies, and some do not, some have fathers, and some do not.

While age and role differences may be clarified by such books as *Meet Miki Takino* or *The Sky Was Blue*, the most effective way may be to enlist the help of the mother (or father) in telling the child stories about "When I was a little girl (or boy)." For older children age roles may be given historical and personal perspective by telling stories in which the lives of his relatives are tied to historical events which would have some meaning to him--"When your grandmother's mother was a little girl, hardly anyone had cars and most people rode in buggies pulled by horses. When your grandmother was little, there were cars; but there wasn't any television yet." If any parent or teacher in the group has enough old pictures and time to prepare a simple book about his child's ancestors this could be used very effectively in the group to help children relate family roles, age, and the passing of time.

One of the major ways to help children learn about families is to provide a range of props for role playing either in the dress-up corner or the dollhouse so that children can try out their concepts of family life with other children. In addition to giving practice in the roles of other family members, role playing often gives the teacher a chance to see what stereotypes the child has--for example, the child who indignantly took the newspaper away from the "mother" because "only daddies read newspapers."

However, teachers must remember that sex roles are now as controversial as sex education used to be. Parental attitudes will vary from the extreme of a mother who is very upset if her boy wants to play with dolls to the mother who gets equally upset if her little girl prefers doll play to other activities. Teachers' attitudes will also vary; but the safest course and probably the best for the child is to recognize matter-of-factly that roles differ from one family to another, just as we recognize that family composition varies. If a four-year-old "mother" goes off to the office and her four-year-old husband objects, the teacher should interpret, "Some mothers work in offices or factories, and some work at home. Diana has decided to be a mother who goes to the office."

Activities for Teaching About Family Members

Language- 6	Puppets
Science-10	Visiting Baby
S-11	Baby Pictures
Social Science- 4	Dress-up Play
SS- 5	Dollhouse Play
SS- 6	Moving Day
SS- 8	Grandmother or Grandfather Visits

Books

Brown, Margaret Wise; *Little Fur Family*, and *My World* (Out of print, try library.)
Carton, Lonie C.; *Mommies*
Copeland, Helen; *Meet Miki Takino*
Flack, Marjorie; *The New Pet*
Gill, Joan; *Hush, Jon*
Hess, Lilo; *The Timid Sheep*
Keats, Ezra; *Peter's Chair*
Krasilovsky, Phyllis; *The Very Little Girl, The Very Little Boy*
Krauss, Ruth; *The Growing Story*
Lenski, Lois; *Papa Small, Let's Play House, The Little Family*
Marino, Dorothy; *Goodbye Thunderstorm*
McCloskey, Robert; *Blueberries for Sal, One Morning in Maine*
Minarik, Else Homelund; *Little Bear's Visit*
Mizumura, Kazue; *If I Were a Mother*
Parsons, Virginia; *Homes*
Puner, Helen Walker; *Daddies, What They Do All Day*
Scott, Ann Herbert; *Sam*
Sonneborn, Ruth; *Friday Night Is Pappa Night, I Love Gram*
Stewart, Robert; *The Daddy Book*
Yashima, Mitsu and Taro; *Momo's Kitten*
Zolotov, Charlotte; *The Sky Was Blue*

HOUSEHOLD OBJECTS AND CLOTHING

Concept Game for Diagnosis and Teaching

Concepts: Household objects and clothing, names of the objects and clothing, functions and materials.

Materials: Pictures backed with sandpaper for use on a flannelboard showing familiar household objects and clothing. Pictures may be cut from catalogues or magazines. They should include objects made from wood, leather, rubber, metal, plastic, cloth, china, and glass. Some examples of household objects might include a chair, table, sink, stove, refrigerator, bathtub, bed, television, dresser (chest), knife, fork, spoon, dishes (china and glass), pots, pans, and a rubber ball. Some examples of clothing might include a dress, sweater, blouse, socks (stockings), shoes, tie, belt, shirt, trousers (slacks, pants), suit, raincoat, boots, umbrella, mittens (gloves), and scarf.

Procedure: Put a single picture on the flannelboard and ask a child "What do we call this? What is it for?" or "What do we use it for?" If the first set of questions shows that the children know most of the names and can give functions, then go on to ask for each picture, "What is it made of?" Begin with pictures of objects that are found in the room or ones that can easily be brought in to demonstrate each material such as a book, a chair, shoes, a sweater, a glass, a fork and a plate, and have these items available. If a child does not know what a book, for example, is made from, hand him a real book and ask him to look at it and see if he can tell what it is made from. If children have problems with pictures, use doll furniture.

Variations and Use as a Teaching Tool: 1. The difficulty of this game can be varied a great deal depending on the age and maturity of the group. For three-year-olds only a few simple items should be used. Do not go on to materials until children are fairly clear on names and functions. Older children enjoy adding more and more items to the game, and a very few may be ready to see finer distinctions between materials. Include objects and pictures of objects that are made of different kinds of the same material, e.g., metals (silver, copper, gold, brass) and cloth (wool, cotton, nylon).

2. Using the same pictures, give each child a group of pictures (between two and four pictures) representing different materials or a group of actual objects. Now hold up a wooden object and ask the children to find pictures of objects made of wood. Use the same procedure to teach for other materials.

3. Ask a child to find something in the room made of wood, etc.

General Suggestions for Teaching About Household Objects and Clothing

Most children (even three-year-olds) are familiar with the names and uses of the most common household objects and clothing. However, the concept game will turn up an occasional child who needs special help in this area; and the teacher can help him informally in conversation related to objects in the room. In addition, the same games which introduce other children to more advanced concepts can be used for more basic ones. For example, in a guessing game the teacher might be thinking about a chair for one child and a dish drainer (toy) for another.

For learning about household objects, the dollhouse and the doll corner provide many opportunities. The teacher can provide small items not ordinarily in the dollhouse such as small cooking pans, pictures for the wall, throw rugs, candlesticks, etc. Many of these things can be bought in the dimestore or improvised from junk. The doll corner also provides a place where many objects can be brought in temporarily for play to increase the children's vocabulary about household objects. Examples of this would be various kinds of cooking utensils, cleaning equipment, tools, etc. Actual cooking activities provide a chance for the teacher to be sure that the children know the names of utensils such as sieves, colanders, lids. Helping with cleaning the room also provides real life experiences with cleaning tools.

The teacher may encourage children who are interested to use pictures of household objects in many ways, cutting them out and placing them on the bulletin board, or pasting them on paper to make a "room of their own." (See the specific activities listed below.)

Children's knowledge about clothing can be increased by providing a wider variety of clothes for the dolls and dress-up corner than usual. A child-size rag doll may be provided with outer clothing so that the children can dress her for the out of doors or with pajamas and robe so that she can be put to bed. Very often boys' and men's clothing is not well represented in the dress-up corner; and socks, belts, ties, tee shirts, coats, and hats should be available for the children to dress in.

In connection with the visit of a baby to school, children may be interested to find out what babies wear. In studying community workers, seasons, weather, or foreign countries, attention can be called to some of the different kinds of clothing worn for different jobs, during different times of the year, or in different places. Providing a box of many kinds of shoes--tennis shoes, safety shoes, sandals, baby shoes, etc.--can broaden children's vocabulary.

Playing with paper dolls is one activity rarely used in school which can be of considerable interest to some children who can thus increase both motor coordination and information about clothing. (Avoid the type with flaps because of the difficulty in keeping the clothing on the dolls. Both magnetic and stick-on types can be handled by preschoolers though they are rarely able to cut them out.)

Both household objects and clothing may be the subject of guessing games. There are also excellent commercial lotto games and puzzles dealing with these areas; or similar ones may be made up by the teacher.

Activities for Teaching About Household Objects and Clothing

All food preparation activities in Chapter 18 may be used for teaching the names and functions of cooking utensils and appliances, as well as dishes, silverware, etc.

Art-32	A Room of Your Own
Table-14	Setting a Picture Table
T-22	Sorting Household Objects
Social Science- 1	Daily Classroom Cleaning
SS- 2	Window or Mirror Washing
SS- 3	Washing Dolls and Doll Clothes
SS- 4	Dress-Up Play
SS-55	Dollhouse Play
SS- 6	Moving Day
SS- 7	A House of Your Own
SS- 9	Packing Suitcases

Books

Brown, Margaret Wise; *Indoor Noisy Book, Goodnight Moon*
Ilsley, Velma; *M Is for Moving*
Lenski, Lois; *Let's Play House*
Stewart, Robert; *The Daddy Book*
Thayer, Jane; *The Little House*

OCCUPATIONS

Concept Game for Diagnosis and Teaching

Concepts: The names and functions of community workers.

Materials: Pictures or figures of community workers including a fireman, doctor, mailman, pilot, stewardess, painter, milkman, engineer, policeman, nurse, policewoman, gas station attendant, businessman, construction worker, etc. Block figures of these community workers may be ordered from a school supply house, or the teacher can cut them from magazines and glue them to tagboard (sandpaper, if the figures will be used to a flannelboard).

Procedure: 1. Give each child two block people or two pictures and say, "We are going to play a game today with some interesting people. Look at the people I give you and see if you can tell who they are and what they do." Tell the children to hold up the ones they can name. Three-year-olds or immature fours may not be able to do this; the teacher should then point to a specific block and ask the child to name it. Go to each child in turn and let him name the person and tell what he does. If the child cannot name either of his blocks, ask him to hand you a block that you name, e.g., "Hand me the policeman," etc. If the child is still not able to hand you the correct block, tell him he had the policeman and point to the block. As each community member is named, take it and stand it in front of the flannelboard you are holding in front of the children. Continue this procedure for the second round until all of the community members are standing in front of the flannelboard.

2. As all of the blocks are standing in front of the flannelboard, say, "Who helps us by putting out fires?" Continue in the same manner reinforcing the concept of what these community members *do.*

3. Now tell the children that all of the people are getting sleepy and must say good-bye so they can sleep. As you pick up each member have the children say good-bye by naming the member. Children enjoy doing this in unison.

General Suggestions for Teaching About Occupations

The concept game presented above and many children's books on occupations focus primarily on the jobs usually known as "community workers," that is, those people who do things which either are related directly to the children's lives such as policemen or who have some element of special interest, such as an airplane pilot. Many of these people wear distinctive clothing or uniforms. In some ways this is unfortunate because it tends to give the impression that such people are stereotyped and not real people, with no existence outside their jobs. Sex stereotypes almost always exist also in these presentations.

Therefore we might suggest that, either before or after finding out whether children know the names and functions of firemen, farmers, etc., the teacher try to use a much more human approach to occupations based on the children's own experience. She might start out with comments made by the children about what their parents do or with questions asked by children such as about why a man is climbing up the telephone pole or why the painters who are painting the school go home at four. The most basic idea that she hopes to get across is that most adults work and that they have different kinds of jobs. Catherine's father teaches big kids about numbers, Martin's mother helps people who can't get the right telephone number, and Leslie's mother takes care of Leslie's little sisters. (It will be important that the teacher not place value on one job over another and that she might be prepared to handle matter-of-factly the fact that sometimes people want to work but cannot find jobs.)

Once children have grasped through conversations the basic idea that adults work both to earn money so that they and their children can live and also to help other people by doing things which need to be done, exploration of occupations can go in whatever direction the interests of the group seem to take. Watching for different kinds of jobs that people are doing and why they do it in that particular way leads to all kinds of discussions in related areas such as tools and sources of energy. For example, from watching a man digging a ditch, children become involved in the question of what makes a jackhammer work. For observing the clerk in a store measuring material for their new curtains, children raise questions about measurement, and where cloth comes from.

When there is interest in a particular kind of work, a special field trip can be made, or a knowledgeable visitor can be invited to the classroom. (See *Field Trips;* and for making the most effective use of visitors, see *Visitors in the Classroom.*)

The teacher should also make it possible for the children to play out the roles they have seen by providing the necessary kinds of props. These might include hose for improvising gasoline pumps; mechanic's tools for garagemen; a medical kit for doctors along with stuffed animals for the veterinarian; tapeline, scissors, and cloth for the sales clerk. The teacher need only use her imagination. A few more elaborate setups for role playing are suggested below.

Occupation is an area in which large numbers of excellent pictures for discussions or for use on the bulletin board are available from many sources. Some of these commercial sources are listed in the Appendix, but the teacher should also not ignore magazine pictures and pictures from the newspaper. Occasionally even coloring books may have good pictures of community workers for cutting out or using as flannelboard characters.

Activities for Teaching About Occupations

Large Motor-28	Cleaning the Playground
LM-34	Woodworking
LM-39	Painting with Water
Table-23	Sorting Day and Night Pictures

Social Science-11	Grocery Store
SS-12	Restaurant
SS-13	Car Wash
SS-14	Gas Station
SS-16	Airport
SS-17	Railroad Train
SS-18	Doctor's Office and Hospital
Miscellaneous- 5	(D) Mailing a Letter
Misc.- 5	(F) Trip to Apple Orchard
Misc.- 5	(G) Trip to Buy Ice Cream

Books

Beim, Jerrold; *Country Mailman*
Bourne, Miriam Ann; *Emilio's Summer Day*
Burton, Virginia Lee; *Katie and the Big Snow, Mike Mulligan and His Steam Shovel*
Lenski, Lois; *Cowboy Small, Policeman Small*
Puner, Helen Walker; *Daddies, What They Do All Day*
Ressner, Philip; *At Night*
Stewart, Robert; *The Daddy Book*
Stevenson, Eric; *Tony and The Toll Collector*

See also all books in the *Your World* series, by the Taylor Publishing Company. (See The Children's Book List included in the Appendix for a more detailed description of the *Your World* series.)

TOOLS AND MACHINES

Concept Game for Diagnosis and Teaching

Concepts: Tools and machines: their names, why we use them, and their sources of power.

Materials: 1. Real tools including a hammer, nail, egg beater, electric mixer, wooden spoon, hand drill, and an electric drill.

2. Toys representing an airplane, car, rowboat, powerboat, sailboat, tractor, and bulldozer. Any other tools or toys representing tools that seem appropriate may also be used.

Procedure: 1. Place the real tools listed above on a tray. Show the children the nail and ask them how they could get the nail to go into a piece of wood. Ask such questions as "Could you push it into the wood?" Establish the idea that by using a hammer the nail could be pounded into the wood. Now show the children a wooden spoon and say, "Let's pretend that we are going to mix a cake, could we use the wooden spoon to help us? What else could we use?"

Show the egg beater and the electric mixer. Now ask, "Which of these three (spoon, egg beater, electric mixer) would mix the cake the fastest and do the best job of mixing?" Continue in the same manner with the hand drill and the electric drill. Try to determine whether children have the idea that machines and tools are used to make jobs easier for people.

2. Now hold up the spoon, the hand drill, and hammer and ask the children what makes them work. If you don't get a response, set the tools on the table in front of you and ask, "Are they working now?" Establish the idea that it takes human power to make them do a job.

Now show the electric drill and the electric mixer. Ask what makes them run. Determine whether children know the term "electricity." The idea of electricity is best demonstrated if one of these machines can be plugged in. (Our experience with four-year-olds showed that most could not use the specific word "electricity" but used descriptive responses such as "plug in," etc.)

Next, bring out a tray containing the model plane, car, and boats. Show the airplane. Ask, "If this were a real airplane, would we plug it in so it would fly?" Many children will find this very amusing, and it should lead directly to the question of what makes the motor in an airplane run. If children do not reply "gasoline" show them a toy car and ask how a real car runs. Have a picture of a gas station on hand if the children seem to need help with this concept.

Finally show the three boats. Ask the children what makes each one go (manpower, wind, gasoline engine). After this idea is established, the children might enjoy demonstrating how the boats go as the teacher drives them across the table (i.e., rowing with the rowboat, blowing with the sailboat, making loud engine sounds with the motorboat).

3. Finally, bring out a tray containing the rest of the tools and machines and ask questions such as, "Which machine could you use to move dirt? What is it called?" Continue in the same manner having children name and give the purpose of each as long as they show an interest in this part of the game.

Variations and Use as a Teaching Tool:

1. Let the children make the noises each tool or machine makes while it is working. They could choose one that they wish to sound like.

2. Let each child choose a tool or toy machine and demonstrate how it works (without power, of course).

Cautions and Suggestions:

1. Be careful with the power tools, especially if a demonstration is planned; they should not be used by the children.

2. Because the toy machines will be so attractive to children, warn them at the beginning that "We are not going to play with the cars and trucks now, we are going to learn about them. When we're finished, you can each play with one." Have time and a place, e.g., the block corner, set aside where the children can play afterwards.

General Suggestions for Teaching About Tools and Machines

If the teacher does not use the Tools and Machines concept game she should be sure to use some other teaching techniques to be sure that children understand the basic concept that we use tools so that we can do things easier and faster. She will also want to be sure that older children know about various sources of power.

The typical child's life is full of experiences with tools and machines; but adults often fail to make use of the opportunity to tell him their names, to show him how to use them properly and safely (if they are suitable for children's use), or to explain how they work. The teacher should be sure to name, demonstrate, and explain whenever a new tool or machine is brought into the classroom or when machines are seen outside. For example, children can be told the names of tools being used by a plumber who comes to fix the sink (and if the children were responsible for its being clogged, the purpose of the grease trap can be explained). A child mixing a cake can be shown the most effective way to stir without splashing the batter over the side. When kindergarteners on a field trip see a diesel truck, a comment can be made as to the difference between gasoline used by most cars and diesel fuel used by some trucks.

Working machines whose mechanisms can safely be observed, such as a clock with the back removed, can be brought into the classroom. Sears or Wards catalogues are excellent sources of pictures of tools and machines for bulletin board or collages.

The interest which children show in tools varies with age, sex, and the individual child; older boys particularly may be fascinated by each new machine which presents itself, while other children may take only a mild interest. However, the teacher should never assume that younger children or girls will or should have no interest in playing with machines, trucks, and cars. All children need a chance to learn about and use such tools as hammers, saws, etc. (See *Woodworking* for a discussion of safe use of tools.)

The kind of information and experiences presented to children obviously will depend on their ages--three-year-olds can understand a demonstration that wheels make it easier to pull things, but kindergarteners may be able to understand enough about gasoline engines or electric motors so that the teacher will have to get some help to be sure her information is accurate.

Activities for Teaching About Tools and Machines

Large Motor- 8	Raking Leaves
LM-11	Outdoor Snow Play
LM-30	Oiling Wagons and Tricycles
LM-34	Woodworking
Science-22	Pulleys
S-23	Working Parts of Machines
Social Science-14	Gas Station
SS-15	Small Cars and Sawdust
SS-16	Airport
SS-17	Railroad Train

Books

Beskow, Elsa; *Pelle's New Suit*
Brown, Margaret Wise; *Two Little Trains*
Burton, Virginia; *Katy and the Big Snow*
Cleary, Beverly; *The Real Hole*
Curren, Polly; *This Is a Road* (Out of print; try library.)
Lenski, Lois; *The Little Fire Engine*, *The Little Sailboat*, *The Little Train*
MacDonald, Golden; *Red Light, Green Light*; *Whistle for the Train*
Schlein, Miriam; *Fast Is Not a Lady Bug*
Schneider, Nina and Herman; *Let's Find Out*
Sharp, Elizabeth; *Simple Machines and How They Work*
Zaffo, George; *The Big Book of Real Trucks*

Selected books from the *Your World* series, Taylor Puslishing Company. (See the Children's Book List, in the Appendix.)

MONEY

Concept Game for Diagnosis and Teaching

Concepts: Coins: their names and relative values.

Materials: A box containing one penny and one nickel for each child (dimes, quarters, etc. can be added depending on the maturity of the group); a box of paper cupcake baking cups; plastic bags with fasteners; and cereal bits, raisins, or other small food.

Procedure: 1. Shake the box of money and ask the children to guess what is in it. Children may respond by naming the coins. Say, "That's right. I do have pennies and nickels. What else do we call them?" Try to elicit the term "money." If not, tell them the term. Continue, "This is a box of money that belongs to me, but today you can play with it for a while." Now hold up a coin and see if the children can name it. After each child has named the penny ask him to pick one out of the box and place it on the table in front of him. Continue in the same manner until all children have a penny and nickel.

2. Now put the baking cups of food on the table (five cups containing one thing and five cups containing five things). Ask the children what we use money for. Establish the idea that money is used to buy things. Continue, "You can use the money you have to buy some things. Will the penny or the nickel buy the most things?" If the group does not understand the relative value of the coins, tell them that a nickel will buy *more* than a penny. Show the children that some cups have only one thing in them and some have five. Let each child use his coins to buy a baking cup demonstrating that the value of the cup depends on how many items are in the cup.

3. Be prepared to expand the game to include dimes and possibly even quarters if working with mature threes, fours, and fives.

Variations and Use as a Teaching Tool: As the children become familiar with the game and show a real understanding of the differences in the value of the coins, let them tell you how much they think the cups should cost.

Cautions and Suggestions: If the teacher does not want the children to eat the food at the time of the testing, use plastic bags (self-sealing or with fasteners) as "shopping bags" so the children can save their purchases.

General Suggestions for Teaching About Money

The idea that money can be used to buy things is more familiar to most children than how much coins and bills are worth. However, many do not understand the process of making change, or returning coins in change when a bill has been given, etc. Children can be given experiences with this in actual practice situations.

A series of experiences might be planned throughout the year starting with a simple situation in which each child is given a nickel or dime to buy an apple or a cup of ice cream. Then children might be taken to shop for food for a cooking project. In these cases the teacher who pays for the food should be very explicit about what is happening in the change-making situation even though she knows the children will not completely understand. "The apples cost 75 cents. I'm giving the man a dollar bill, and he will give me 25 cents in change because 75 cents isn't as much as a dollar."

Older children might make a trip with the teacher to buy some more expensive item, such as a fry pan for the nursery school; or the teacher might order such an item from a mail order catalogue, explaining this process to the children as well as how much it will cost. In the case of a mail order, some children may be able to understand what checks are and why we use them.

Once the idea of money as exchange has been introduced, a toy cash register or a box for play money can be used in a number of play situations--paying toll on the highway, playing airport and buying tickets, buying tickets for the train, or paying the bill at the restaurant.

While the use of actual money in these situations might make for a better educational experience, most teachers find that there are children who value coins so highly that they will try to take them if there is a chance. Because of the effect that this would have on relationships between teacher and children, it seems better to limit the use of actual money to situations where the teacher can keep unobtrusive track of it, and to let the children use play money in role playing. However, this can be play money which the children make themselves using real money as a model. In this situation, they can have a chance to look at the actual coins very closely, using a magnifying glass if they like. The older children may be interested in finding out whose picture is on the coins and what the lettering and symbols mean. By having a collection of foreign money it is possible to let the children handle and look at coins more freely.

Generally the teacher should be aware that money is another emotionally loaded concept. She should be prepared not only for the child who wants it so much that he takes it home, but also for the mother who feels that it is not appropriate to talk about the value of money so early. If the teacher can discuss money in the same matter-of-fact manner as any other topic, and regard possible loss of coins in the same way that she would the loss of any small object from the room, she may help children to learn about it without the feeling that money is either something very good or very bad.

Activities for Teaching About Money

Art-33	Toy Money
Table-21	Sorting Foreign Coins
Social Science-11	Grocery Store
SS-12	Restaurant
SS-13	Car Wash
SS-14	Gas Station
SS-16	Airport
SS-17	Railroad Train

Books

Brenner, Barbara; *The Five Pennies*
Molarsky, Osmond; *Right Thumb, Left Thumb*
Stevenson, Eric; *Tony and the Toll Collector*

TIME

Concept Game for Diagnosis and Teaching

Concepts: Times of day.

Materials: Small pictures cut from magazines showing different times of day, sandpaper to back the pictures, and a flannelboard.

Procedure: 1. Say, "I have some pictures about times of day." Pass one picture to each child and have him look at it as you begin telling a story of things that can happen during different times of the day. As you describe the activities also name the time of day, i.e., "The first thing in the *morning* the little boy hops out of bed. Who has the picture of *morning?*" Place it on the flannelboard and continue in the same manner referring each time to the activity *and* the time of day. Specific times of the day may need to be limited with three-year-olds (morning, daytime, nighttime). With fours the concepts could be expanded to include breakfasttime, schooltime, lunchtime, noon, afternoon, suppertime, evening, and nighttime.

2. After the sequence of pictures is on the flannelboard, ask individual children to point to pictures that show things we do in the morning, day, night, etc.

3. Some mature groups may be able to name the time of day as the teacher points to a picture and asks, "What time of day do we do this?"

Variations and Use as a Teaching Tool: Use photographs of your group during their various school activities and discuss what time of day, day of the week, etc. the activities happen.

Cautions and 1. In finding pictures of specific time activities be sure that the activities are ones the children in your group are generally involved in. For example, don't use a picture of breakfasttime if most of your children do not have breakfast each morning.

2. If there is difficulty finding appropriate pictures in magazines, snapshots taken of the children in school can be supplemented by pictures taken of some child (not in the group) getting up, having lunch, going to bed, etc.

General Suggestions for Teaching About Time

To adults who are only too conscious of the passage and presures of time, it often comes as a surprise to find how little children know about time concepts. Young children are often very unclear about measurement of time, and often equally uninterested. If the teacher finds that this is true of her children, she may begin with the very basic idea that we want to know what time or what day it is so that we can know what will happen next. She can do this by talking about time concepts in relationship to ongoing activities in the room without expecting children to remember or to use the specific concepts at first. For example, she can say, "It's almost noon; we need to get ready for lunch," or "This morning at 9:30 we'll have a fire drill."

There should always be a large clock in the room. While children will rarely learn to tell time by the clock before kindergarten or first grade, they can learn much earlier what a clock is, and can become familiar with the kinds of words we use for exact times. Further, they can begin to understand the reasons why it is desirable to know what the time is and to schedule things by it. For example, if they know that the bus is coming for a field trip at a certain time, it is logical that they need to know when to be ready. If Patrick's mother is coming early, the teacher must watch the clock so that he can have his juice finished when she arrives. If there is something which always happens at a certain time like a noon whistle or older children going out to recess, the children can learn to expect this daily occurrence and relate it to the position of the hands of the clock. One idea is to have a paper clock with movable hands next to the real clock. Its hands can be set at a time when something is scheduled, for example, time to go outdoors, and the children can tell the teacher when the two clocks match. For older children who know numerals, a digital clock next to the other clock can help with learning to tell time.

Most children come to school knowing about daytime and nighttime, but the teacher may want to expand their experience in this area. Since the children will ordinarily never be at school at night, she must use role playing, doll play, and stories about what happens at night. For example, the teacher might turn off the lights and let the children pretend it is nighttime. (If it could ever be arranged to bring the children back to school some evening in the winter so they could see what the school is like in the dark, and perhaps meet the night watchman or a cleaner who works at night, it would remove many misconceptions. One child thought that the director of a day care center lived there and spent her nights baking cookies for the children.)

In teaching about time spans other than those of a single day, the teacher can also refer to the child's experience. (See also *Memory, General Suggestions for Increasing*.) She can refer casually to things that happened yesterday or last week or which will happen tomorrow or next week, being sure that these events are of interest to the children. When the future events arrive, she can remind the children that she had told them that this would be happening.

With days of the week and months of the year, as with actual hours of the day, the nursery school teacher will mostly set the stage for later learning in kindergarten and first grade by using the words so that they become familiar to the children; but she should not expect the children to use the words accurately themselves. For example, she might comment, "Did you know that today is the first day of February and that February is the month when we have Valentine's Day?" or "It's Monday; that's the day Mrs. Chan comes to sing with us." Kindergarten teachers, however, will probably want to begin to use calendars to talk about the day of the week and the day of the month. This is a traditional opening activity in kindergarten; but the teacher may want to ask herself whether it is really necessary to do this every morning of the year, or whether the time might not better be spent in other learning once the children have mastered the concepts (with an occasional review). As with all other curriculum planning, a lot depends on interest.

Children at all ages may become interested in longer units of time and historical past; but their first concepts are likely to be quite confused, perhaps lumping together Model-T cars, castles, and dinosaurs as things that existed "a long time ago when you were a little girl." (!) Like all concepts these earliest historical ones can best be tied to actual people, by telling stories or reading books about what life was like when their parents (or their grandparents) were little. Parents and grandparents should also be alerted to the children's interest, so that they can tell the child about things that really happened to them. (See *Family Members, General Suggestions for Teaching.*)

If a child asks, "When did dinosaurs (or Jesus) live?" the actual numbers of years can be given for events in geological or biblical time so that children become accustomed to terms like "2,000 years," but without the expectation that they will really understand that this is longer than 500 or 50 years. The idea of a single year, however, is not so difficult for children since it can be related to their experience--for example, asking just before Christmas if the children remember things that happened the previous Christmas, and telling them it is a whole year from one Christmas to the next.

Finally, in teaching about time, the teacher is faced with a situation frequent in education where she must balance two kinds of teaching and two types of values. She wants children to learn time concepts and to learn eventually to organize their lives efficiently, but she does not want to turn out compulsive children who are so concerned with completing a project or being somewhere on time that they cannot enjoy the activity.

Thus, the teacher needs to provide a model to show children that it is possible to order one's activities and to be considerate of others by being on time, and at the same time to be flexible about time when it is not important. Children are usually more comfortable when the program follows a routine and they know what to expect, but they can accept and enjoy changes in their schedules as long as they are warned in advance that there will be a change and told why it is being made. Thus, the teacher could say on one day when appropriate, "You're having so much fun with finger painting that we won't have a story today. We'll have our juice late and go outside." On another day, however, she may have to say, "I know you would like to play longer with the clay; but we have to have juice right on time today because Miss Xavier has to leave early."

Activities for Teaching About Time

Large Motor-16	Shadow Play
Art-31	Nighttime Pictures
Table-23	Sorting Day and Night Pictures
Science-11	Baby Pictures
Food-18	Acorn Squash
F-25	Pizza
F-26	Cake Making
Miscellaneous- 7	Timer

Books

Brown, Margaret Wise; *Goodnight Moon*
Burton, Virginia Lee; *Mike Mulligan and His Steam Shovel, The Little House*
Fisher, Aileen; *In the Middle of the Night*
Francoise, Jeanne; *What Time Is It Jeanne-Marie?*
Ipcar, Dahlov; *The Cat at Night*
Krasilovsky, Phyllis; *The Very Little Girl, The Very Little Boy*
Krauss, Ruth; *The Growing Story*
MacDonald, Golden; *Red Light, Green Light*
Ressner, Philip; *At Night*
Schatz, Letta; *When Will My Birthday Be?*
Schneider, Herman and Nina; *Follow the Sunset*
Schneider, Nina; *While Susie Sleeps*
Spier, Peter; *The Erie Canal*
Tresselt, Alvin; *Sun Up*
Tudor, Tasha; *The County Fair, Alexander the Gander, Dorcus Porcus*
Turkle, Brinton; *Thy Friend Obadiah, Obadiah the Bold, The Adventures of Obadiah*

SEASONS

Concept Game for Diagnosis and Teaching

Concepts: Seasons: their names and characteristics.

Materials: 1. Four sheets of tagboard (8½" x 11") taped end to end so they can be unfolded to stand on a table. On each sheet is a simple picture (drawn or cut from a magazine) that gives a picture clue for a season. The fall sheet could show, for example, falling colored leaves; the winter sheet, a snowman; the spring sheet, tulips; and the summer sheet, the sun.

2. A series of 5" x 8" index cards (four for each child) with magazine pictures depicting activities or objects related to a specific season. Include for fall cards with autumn scenes such as raking leaves, pumpkins, and jack-o'-lanterns; include for winter pictures of snow play, sleds, ice skates, snow scenes, snowsuits, and Christmas trees; for spring include Easter, birds building nests, spring flowers, and planting; and for summer find pictures of swimming, lake activities, camping, and sunbathing.

Procedure: 1. Unfold the tagboard showing each picture clue that represents a season. Discuss each picture and see if the children can *name* the season. If they cannot, tell them the name and talk about the season represented by the picture, e.g., "Here are some brightly colored leaves falling. When this happens it is the season called Fall or Autumn." Continue in the same manner with each of the picture clues.

2. Now give each child four index cards with pictures representing activities or objects related to each of the four seasons. Tell them you are going to play a game to match the activity or objects to the seasons. "Look at your pictures. You have pictures of things you could use or do during the summer, fall, winter, or spring." (Point to each large tagboard picture as you name each season.) Now ask each child to find a picture of something that looks like the fall of the year. As each child finds the picture, place each one in front of the tagboard picture representative of the specific season. If children have difficulty, again talk about the clues of the season using the pictures chosen by the other children. Continue in the same

manner with the other seasons until all of the index card pictures have been matched to the large tagboard pictures.

Variations and Use as a Teaching Tool:

1. Give children extra index cards and ask them to find all of the pictures that are like winter, etc.

2. Let a child hold up any picture he wishes and match to the corresponding season.

3. Using only pictures of clothing, ask the children to put together all of the things we would wear in winter or in summer (snowsuits, overshoes, mittens, bathing suits, playsuits, beach clothes, etc.).

Cautions and Suggestions:

1. Whether this game is used in this exact form depends on whether the children are living in an area where there are four distinguishable seasons. If not, it should probably be used only with kindergarteners.

2. Some children, especially threes, may have real difficulty with matching. In this case begin with only two seasons, winter and summer.

3. Whether the children should be able to name the seasons as well as to match will depend on the maturity of the group as well as their experiences. Threes will rarely know the names, and it is probably not appropriate to try to teach them.

General Suggestions for Teaching About Seasons

Two major points should be made about the teaching of seasons in the nursery school and kindergarten. The first one is familiar by now, namely, do not overdo it. Discussion of seasons and holidays often takes a tremendous proportion of the children's time and has almost exclusive use of the bulletin board. While this area is important for children to know about, particularly as seasons relate to weather, the teacher should be sure the children are really interested and not simply repeating things they already know.

A second concern is presenting seasons is to be very careful to relate teaching to the actual progression of seasons in the community where the child lives. If children do not themselves have the actual experience of marked differences between summer, fall, and winter, for example, we would not want to present this too early. Thus, for children who live in the south of the United States or in countries in the torrid zone, the teacher would probably wait until the children were four to five before talking very much about the snow and winter. Further, it would be good if this presentation could be tied to some real person, such as a teacher who had come from the North and could tell children about playing in the snow when she was a child or another child who had come from the North.

The best learning about the seasons comes about from incidental comments from day to day, such as, "It is getting to be fall--you need your sweater today," or "Did you see the ice on the puddles this morning--it's almost wintertime." The children can also be alerted to subtle kinds of changes as the year progresses. The first leaf coming off the trees, the very first sprigs of green grass in the spring, the first dandelion, or the first robin can all be brought to the children's attention.

One technique to help children see changes that are not so obvious is to have a walk which the children take frequently during the year and to look for changes in familiar places, or to have a small space in the yard which the children can look at particularly to see changes in the soil and plants, or perhaps in a special tree. Thus, labeling seasons by their proper names is something which should be learned incidentally as the seasons progress, rather than being made the subject of drill or specialized games.

All teachers should be aware, particularly those working with disadvantaged children, that there are some aspects of the seasons which have far more than an intellectual impact on the children. A child may look on winter, not as a fun time in the snow, but as an unpleasant time to be endured, if the place where he lives is cold or if he has inadequate clothing. For other children, hot weather in the city is something which results more in feelings of discomfort and irritability than it does in fun and play. The teacher needs to be sensitive to these realities, and to reflect the children's feelings about them. In some cases, she can help teach children how to adjust as well as possible to changing temperatures. Children can learn that in hot weather they can be most comfortable if they play quiet games, drink plenty of liquid, and stay out of the sun. While hopefully the teacher can see that children are provided with warmer garments in winter, she must also be ready to accept that the child who really feels uncomfortable outside is not gaining very much by being forced to go outside to play.

Activities for Teaching About Seasons

Large Motor- 8	Raking and Jumping in Leaves
LM-10	Playing in an Open Meadow
LM-11	Outdoor Snow Play
LM-16	Shadow Play
Art-10	Chalk Drawing
A-26	Nature Construction
A-39	Holiday Decorations
Science- 3	Collecting Flowers
S- 4	Preparing Leaves
S- 5	Forcing Spring Leaves and Flowers
S- 7	Observing Birds
S-13	Weather Report
S-14	Weather Doll
Miscellaneous- 5	(C) Year-Round Nature Walk
Misc.- 5	(F) Trip to the Apple Orchard

Books

Bourne, Miriam Anne; *Emilio's Summer Day*
Brown, Margaret Wise; *The Winter and Summer Noisy Books*
Burton, Virginia Lee; *Mike Mulligan and His Steam Shovel*, *The Little House*
Craig, Jean M.; *Spring Is Like the Morning*
Garelick, May; *Winter Birds*
Hader, Berta and Elmer; *The Big Snow*
Hoff, Sydney; *When Will It Snow*
Merriam, Eve; *Andy All Year Round*
Schatz, Letta; *When Will My Birthday Be?*
Tresselt, Alvin; *Autumn Harvest*, *White Snow*, *Bright Snow*
Victor, Joan Berg; *Shh Listen Again*, *Sounds of the Seasons*

ASTRONOMY AND WEATHER

Concept Game for Diagnosis and Teaching

Concepts: Rain, storm, lightning, thunder, snow, moon, stars, sun.

Materials: 1. Pictures from supply houses such as David C. Cook, or pictures cut from magazines depicting scenes of the sun, moon, stars, storm clouds, rain, lightning, and thunder. Also cut from magazines pictures showing snow, fluffy clouds, an airplane, rocket, and a few other means of transportation such as an automobile, horse, bicycle, sled, etc.

2. "Window" made from a 3" sheet of styrofoam, outside dimensions approximately 15" x 17" and inside dimensions approximately 10" x 13"; or a "stage" made from a cardboard box with a 10" x 13" hole cut in it. (If smaller pictures are taken from magazines, back them on construction paper.) For the "stage" or "window," make a curtain of brightly colored or patterned material pinned at the top to the styrofoam so that it covers the window and can be thrown back to reveal a picture.

Procedure: 1. Show the covered window to the children and tell them that when the curtain is thrown back they can look out the window.

2. Put the picture of rain behind the window and let the first child throw back the curtain. Let the child freely describe what he sees and then direct specific questions to see if the children know that rain is water, and comes from rain clouds in the sky.

3. The next picture shows dark, angry clouds and lightning. After the child draws the curtain and describes what he sees, ask specific questions to see if the child can name lightning and understand that thunder follows lightning. Discuss the general characteristics of clouds. (Are all clouds storm clouds? What do storm clouds look like? etc.)

4. The next picture is of a scene showing children playing in the snow. Allow a free description and then direct specific questions to see if the child knows that snow is cold and also, like rain, comes from the clouds. Ask what would happen if a snowball was

brought indoors, to see if the children understand snow as a frozen form of water.

5. Now put the night pictures showing the moon and stars behind the window. Ask what time it is, trying to elicit "nighttime," and then ask the child to name some of the things we see at night in a clear sky. Point to the moon and stars and see if the child can name them.

6. The next picture is of a bright, sunny day with the sun clearly visible. Ask what time it is (daytime) and, pointing to the sun, see if the child can name it.

7. Next put on the table pictures of a jet airplane, a rocket, and possibly an automobile, a horse, a sled, bicycle, etc. Tell the children that all of these are pictures of things we might be able to ride on to get us from one place to another, but they all would not be able to take us to the same place. Again put the nighttime picture of the moon and stars in the window. Ask the children if it is possible to go to the moon. Then ask a specific child to choose the picture on the table that shows the way we would use to get to the moon. If the rocket is chosen, ask if it might be possible for the rocket to land on the moon.

8. Next show the picture of the sun and ask if it is possible to go to the sun. An imaginative or informed group might again choose the rocket as a means of getting there. Discuss the idea that the sun is much further away than the moon and it would be impossible to land a man on the sun because the sun is far too hot.

9. Finally, show a picture of white fluffy clouds and ask if it is possible to get to the clouds. Ask how we could get there, establishing the idea that the plane would be able to fly among the clouds. Stress the idea that the rocket can fly much higher than the airplane and that the moon, sun, and stars are much further away than the clouds.

Variations and Use as a Teaching Tool: If the teacher finds that the majority of children do not know these concepts, the game can obviously be turned into a teaching game and a basis for group discussion. If the children enjoy the game, it can be repeated on several days, varying the picture for each child each time.

Cautions and Suggestions: Because the "window" is a little trouble to make, it is tempting just to hold up the pictures one by one. We have found that, except for the most mature groups, response to pictures alone is often poor, whereas some procedure such as the window which incorporates both an element of surprise and action on the part of the child, gets a much greater degree of interest from the children.

General Suggestions for Teaching About Astronomy and Weather

Astronomy and weather have been linked as concepts because of the ease of testing them together. However, for teaching, once the teacher has established how much the children know about these areas, astronomy may be more closely tied to times of day (night and day), and weather more closely tied to temperature.

For three-year-olds and inexperienced older children, the basic teaching about astronomy will be the relation of the sun to the daytime and stars, planets, and moon to nighttime. The children may want to spend time thinking about and talking about what happens in the daytime and what happens in the nighttime. (See *Time*.) The teacher may comment that we see the sun in the daytime, and that we can see the moon sometimes too, calling the children's attention to the moon in the sky. She might also comment that we cannot see the stars because the sun is so bright, but that they are there in the daytime, too.

With the recent emphasis on space and the solar system, even three-year-olds may be ready for the concepts that the stars are terribly far away, the sun not quite so far, and the moon much closer. However, the teacher should not be surprised if threes do not seem to understand or show very much interest in this; but she will certainly find that her four- or five-year-olds are far more knowledgeable in this area than even third or fourth graders were 15 or 20 years ago. She can expect that they will want to know about many things which she may have to look up in books, and that much of their play will be related to space travel. Thus, it may be appropriate to discuss with older children the difference between planets and stars. They may be sufficiently interested to make it worthwhile to borrow an orrery from a public school science laboratory or to construct a model of the solar system using balls hanging from the ceiling of the room. If this is the case, children can certainly understand the relative sizes of the various planets, the fact that the planets closer to the sun than we are very hot, whereas those beyond us in the solar system become colder and colder. They can also understand that there is not air to breathe on the other planets, and that we would always have to wear spacesuits to visit them. It may be possible to make a trip with kindergarteners to visit an observatory or a planetarium; and perhaps a special trip may even be arranged in the evening for the children to look at the moon through a telescope, if they show a very high degree of interest. Certainly, the teacher should have at least one good reference book on space travel to answer the children's questions and a selection of pictures from various magazines which have recently covered this topic.

In teaching children about weather and temperature, the teacher obviously has immediate experience to draw on. For young children, one of the most effective ways to make them aware of weather is to provide a window which is not curtained or filled with plants and which has a clear standing or sitting space in front of it so that the children can simply look at the out-of-doors when they wish. Often children enjoy just looking out at the rain or the snow or looking up into the sky and watching the sun go behind the clouds. (Of course, many other things can also be seen through a window, such as birds, animals, and passers-by.)

A variation of the idea of "a window on the weather" is to try to see that children have adequate clothing to protect them from wet and snowy weather so that they can actually be out when it is raining or when it is snowing. Just the experience of looking up into the sky as the rain comes down in their faces is a very exciting one for many children.

The teacher of young children should also be sure that she uses weather terms correctly, and that she makes her comments about weather meaningful rather than simply routine. She might comment, for example, "The wind was blowing a real gale today; it almost blew my umbrella inside out," or "Those gray clouds look like rain clouds; we better play outside early today."

Older children may learn more about how we study the weather in a more formal way. Among the science activities in Chapter 16 is a complete write-up of "weather man" activities in which children themselves study the weather in various ways. Children may become interested in weather in other countries or other places in the United States and want to find out more about them. A teacher may bring in the weather report section cut out of the paper in order to give the children some idea of weather changes throughout the United States; or if there is a good television weather report on during the time the children are in school, the teacher may tune into this to let them get a better idea of what weather prediction is all about. For both weather and astronomy, many appropriate bulletin board pictures can be found by the teacher and children.

As with so many topics, the teacher again needs to be aware that there are emotional aspects to astronomy and weather. Occasionally, one finds a child who is specifically afraid of the stars or the moon, or more commonly has generalized fear of nighttime or the dark. Very often we find children who are afraid of lightning and thunder, or of windstorms, such as tornadoes or hurricanes. A matter-of-fact approach to discussing these aspects of the weather can be helpful, but often more is needed. Some children find that hearing stories about other children who have been afraid of these things is helpful; and others seem to find some release through talking about their fears to the teacher, drawing pictures about them, or telling stories about them.

In some instances it may be desirable to have a conference with the parents to try and be sure that the fears are being dealt with at home in a matter-of-fact and reassuring way, rather than by making the child feel that he is babyish for being afraid or giving him too much attention as a result of the fears. In addition, the older child can be helped to deal with these fears through telling him of the safety measures which he can take to avoid being hurt. For example, a child can find reassurance from knowing that one should stay inside when there are lightning and thunderstorms, but that one is also safe in a car.

Activities for Teaching About Astronomy and Weather

Large Motor-11	Outdoor Snow Play
LM-16	Shadow Play
LM-29	Looking at Cloud Shapes
Art-31	Nighttime Pictures
A-38	Kites
Table-23	Sorting Day and Night Pictures
Science-13	Weather Report
S-14	Weather Doll

Books

Brown, Margaret Wise; *Two Little Trains, Goodnight Moon*
Burton, Virginia Lee; *Katie and the Big Snow*
Carton, Lonie C.; *Mommies*
DeRegniers, Beatrice Schenk; *The Shadow Book*
Ets, Marie Hall; *Gilberto and the Wind*
Fisher, Aileen; *In the Middle of the Night*
Garelick, May; *Winter Birds, Where Does the Butterfly Go When It Rains?*
Hader, Berta and Elmer; *The Big Snow*
Hoff, Sydney; *When Will It Snow?*
Iwasaki, Chihiro; *Staying Home Alone on a Rainy Day*
Keats, Ezra Jack; *The Snowy Day*
Marino, Dorothy; *Goodbye Thunderstorm*
Schneider, Herman and Nina; *Follow the Sunset*
Tresselt, Alvin; *Rain Drops Splash; Sun Up; Follow the Wind; White Snow, Bright Snow*
Turkle, Brinton; *The Sky Dog*
Yashima, Taro; *Umbrella*
Zolotow, Charlotte; *Hold my Hand*

Also selected books from the *Let's Read and Find Out Series*, by Thomas Crowell.

GEOGRAPHY

Concept Game for Diagnosis and Teaching

Concepts: Geographical terms.

Materials: Roll of brown wrapping paper; two large mailing tubes; and pictures either drawn or cut from magazines showing a road, trees, bushes, river, bridge, lake, waterfall, tunnel, mountains, hills, farm, town, city and airport. (*National Geographic* and *Holiday* are good sources.)

On the roll of brown wrapping paper draw or paste the pictures of the above in sequence. Tape each end of the wrapping paper to the mailing tubes. The tubes are then put over the legs of two overturned chairs, placed at either end of the table.

Procedure: 1. Tell the children they are going to take an imaginary trip, which will be like watching a movie, and that they will see many interesting things along the way.

2. Put the mailing tubes over the ends of the chairs and begin to roll the "movie." As the geographical features and objects appear, ask specific children to name them. The teacher's questions could go something like this. "Let's travel along this. What is it called? (road) Now we can hear the water rushing over the cliff. What is that? (waterfall) Next we come to some water. What is it called? (river) We won't get our feet wet because we are standing on a (bridge). Look at the boats. They are sailing on some water called a (lake). Up high are the (mountains). They are so high that they have snow on them. Now the road goes into a (tunnel) in the mountain. Here are some animals, a cow, a horse, and some chickens. They all live on a (farm). Now we see a few houses, close together and we have come into a (town). Look at the tall, tall buildings. Now we're in a great big

(city). Listen to the loud noise? (airplane) We're at the end of the movie and we have arrived at the (airport)."

Variations and Use as a Teaching Tool:	Have available for the children different vehicles (car, boat, tractor, steam shovel, airplane) which they can move. As the movie comes to the different geographical and man-made areas, let the children choose a kind of machine that might be found in that area. Construction could be going on in the city or at the airport. Roadwork could be done on the highway.
Cautions and Suggestions:	City children may not be familiar with things found in the country and vice versa. It might be appropriate to begin with the most familiar; the "movie" can be any length, so less familiar items could be added gradually.

General Suggestions for Teaching About Geography

As with all areas, the teacher begins teaching geographical concepts by presenting those which are most familiar to the children; and these will obviously vary from school to school. She will be sure that children know the names of geographical features in the immediate neighborhood such as hill, street, or creek by using these words with the children as they take their walks or talk about the walk afterward. It is particularly good if children can experience these features in many ways--feeling and talking about how walking uphill is different from walking downhill or wading in a lake and listening to the water on the shore. After this the class might go on to visit somewhat more distant landmarks on a bus trip, for example, making a trip to see a waterfall. (Again it is not just a question of passively looking at the falls through the window of the bus, but finding out where the water comes from and where it goes.)

Often it is found that children are not familiar with the words for geographical concepts even though they have had considerable experience with the places themselves. For example, Ithaca, New York, lies at the foot of a large lake which can be seen from many parts of town; and most children from Ithaca have played in a park at its edge. Yet many do not use the word "lake." In the same way children who live in a town or city, or who walk through woods, may not be familiar with these words because grown-ups have little occasion to use them in talking with children.

In most cases the teacher should not go beyond this point with three-year-olds. However, when it is clear that an older group can talk about the immediate environment in their community reasonably accurately, the teacher can move on to presenting through stories, pictures, and movies whatever the children have no chance to experience directly. These might be oceans, mountains, rivers, icebergs, deserts, depending on the area and the interest of the children.

The child should have a chance to incorporate both familiar and unfamiliar concepts into his play as well as hearing about them in books and discussion. Providing props in the sandpile or sand table, occasionally providing enough clay or playdough to let children cover a table in a cooperative geography project, or helping older children plan a geography project using papier-mache will allow children to do this three-dimensionally.

Older children may be ready to make a map to illustrate their play yard or to follow on a walk a map which the teacher has drawn. An understanding of the fact that a map represents the larger world at a very small scale may be gained by watching a map being made and then by making one oneself. The concept of scale may be explained by drawing a map of the schoolroom in which one inch represents five feet and by letting children help in the measuring and drawing. The teacher should not at this stage be concerned about the accuracy of placement of various features, since it is the concept of "map" itself which is essential here. Further, the question of scale need not be introduced if children are not ready for it.

Once the children know what a map is, it may be appropriate (especially for kindergarteners) to add road maps to the props for car and truck play and to introduce a globe into the room. With the globe the teacher can simply make the comment that this is what our world looks like, and show the children the spot where their city is. Again, to our space-age children the idea of earth as a ball should not be nearly as difficult as it was in previous years; and it may be quite possible to use the globe as a resource for children to refer to when discussing transportation, foreign countries, differences in weather, or even current events. (Avoid buying a globe which is too small or one in which the undersea features are pictured in such a way that they appear like mountains above the surface.)

Activities for Teaching About Geography

Large Motor-10	Playing in an Open Meadow
LM-36	Sand Play
Social Science-16	Airport
SS-17	Railroad Train
Miscellaneous- 5	(B) Maps for a Nature or Treasure Walk
Misc.- 5	(H) Geographical Bus Ride

Books

Brizen, Bill; *Rooftop Hogi*
Bright, Robert; *I Like Red*
Brown, Margaret Wise; *The Little Trains, Wheel on the Chimney*
Burton, Virginia Lee; *The Little House*
Flack, Marjorie; *The Story About Ping, The Restless Robin*
Hopkins, Lee Bennett; *I Think I Saw a Snail*
Huntington, Harriet; *Let's Go Outdoors, Let's Go to the Brook, Let's Go to the Seashore*
Ipcar, Dahlov; *Ten Big Farms*
Lenski, Lois; *The Little Farm*
McCloskey, Robert; *One Morning in Maine*
Schick, Eleanor; *City in the Summer*
Schneider, Herman and Nina; *Follow the Sunset*
Spier, Peter; *The Erie Canal*
Sutherland, Efua; *Playtime in Africa*
Tresselt, Alvin; *Rain Drops Splash, Wake Up Farm, Autumn Harvest, Follow the Road, I Saw the Sea Come In, It's Time Now*

(See also books listed under *Cultural Similarities and Differences, List of Activities*.)

PLANTS, PARTS AND FUNCTIONS

Concept Game for Diagnosis and Teaching

Concepts: Parts and functions of plants.

Materials: Pictures drawn or cut from magazines showing a flowering plant, a deciduous tree, and an evergreen. The pictures should include details of plant parts such as the flowering plant's stem, leaves, and flower; the deciduous tree's trunk, bark, limbs, and leaves; and the evergreen's pine needles, pine cones, limbs, etc. The best kind of pictures would also show the roots or bulb. (Seed catalogues are often good souces of such pictures.)

Procedure: 1. Show the picture of a flowering plant. Ask what it is called, trying to elicit "plant." Ask if real plants are alive. If the idea is established that plants are alive, find out how much children know about the characteristics of plants that help us know they are alive. Say, "You are alive and you grow. Do plants grow? What do plants need to do to keep alive? Do they eat? How do they get their food? What things in nature help keep them alive?" (sun, water, etc.)

2. Ask the children to point to the part of the flowering plant that gets food for the plant. See if the children can name the "roots." Point to the other parts and see if the children can name them. If working with a mature group the simple function of each part could be discussed (stem--to hold flower, leaves--collecting sun's rays, flower--home for the seeds).

3. Show the pictures of the two trees. Ask the children to name the parts of the trees, noting differences, leaves, pine needles, etc. Note that trees also have a stem and see if children can name "trunk." Ask if both lose their leaves during winter. If the children know that only the deciduous tree loses its leaves, discuss why the pine tree is called an "evergreen."

Variations and Use as a Teaching Tool: 1. Compare the flowering plant to one of the trees to establish the similarities and differences.

2. Use a real flowering plant rather than a picture, or conduct the session outdoors if suitable trees are in the yard. Pull up a small plant to show roots.

Cautions and Suggestions:

1. Most children will not know these concepts if growing a plant is not within their experience. If few children have the basic concepts, the teacher may want to make this into a teaching game as soon as she has established a general level for the group.

2. These concepts are too advanced for all but unusually advanced three-year-olds, though some of the experiences described below would be quite appropriate.

General Suggestions for Teaching About Plants, Parts and Functions

Most concepts in the above concept game involve the names and functions of various parts of plants. If the teacher finds that children in her group are not familiar with these ideas, she should recognize the necessity of using experiences with real plants.

Growing plants of their own in the classroom is a fascinating activity, even for three-year-olds, and provides all kinds of chances for discussion of the parts of the plants as well as where plants get their food and why they need sunshine and water. Kindergarteners may be able to understand the way plants breathe and the simple idea that they help produce the oxygen we need to breathe. They may even carry out simple experiments involving differences in light, water, and fertilizer. (See *Plants in the Classroom*.)

Learning the names of different kinds of plants can be the focus of a walk down a city street or through the woods, with children looking for grass, weeds, flowers, bushes, vines, evergreen trees, and deciduous trees. An advanced group may become intrigued with identifying plants and want to learn the names of a variety of flowers and trees. Here collecting and pressing blossoms and leaves in spring and fall are good activities as is collection of dried weeds in the winter. The latter may lead inadvertently to a discussion of types of seeds as children find sticktights, sandburs, and other seeds attached to their clothing. In fact, a focus on plants may lead in any one of a dozen directions if the teacher follows the children's lead.

One sure way to clarify in children's minds the difference between an evergreen and a deciduous tree is to take the children to cut their own Christmas tree where there are both types and to let the children decide whether they want an evergreen or a bare deciduous tree. (Of course, in case the decision is for the latter, the teacher must be prepared to accept with humor the problems of decorating a bare-limbed tree and must be sure before she gives the choice that the deciduous tree is also for sale.)

Activities for Teaching About the Parts and Functions of Plants

Large Motor- 8	Raking Leaves
LM- 9	Raking and Jumping on Straw
LM-10	Playing in an Open Meadow
Art-17	Texture Rubbings
A-18	Vegetable Painting
A-26	Nature Construction
Science- 1	Plants in the Classroom
S- 2	Measuring Plant Growth
S- 3	Collecting and Pressing Flowers
S- 4	Preparing Leaves
S- 5	Forcing Spring Leaves and Flowers
S-24	Magnifying Glass
Food- 7	Exploring Food in Various Forms
F- 8	Real Food in the Housekeeping Corner
F-15	Cutting up Fruits and Vegetables
F-21	Citrus Fruit Juice
Miscellaneous- 5	(A) Color Walk
Misc.- 5	(C) Year-Round Nature Walk

Books

Cleary, Beverly; *The Real Hole*
Foster, Willene; *Seeds Are Wonderful*
Huntington, Harriet; *Let's Go Outdoors*, *Let's Go the the Brook*, *Let's Go to the Seashore*
Ipcar, Dahlov; *Ten Big Farms*
Schatz, Letta; *When Is My Birthday Coming?*
Udry, Janice; *A Tree Is Nice*
Zion, Gene; *The Plant Sitter*

PLANTS AS FOOD SOURCES

Concept Game for Diagnosis and Teaching

Concepts: Plants, their uses as food, and the portions of plants used as food.

Materials: A variety of actual fruits and vegetables common to the child's experience. If possible, include foods that grow on trees (apples, pears, oranges, peaches, cherries, and bananas), foods that grow on vines or other plants above the ground (tomatoes, beans, peas, corn, lettuce), and some foods that grow in the ground (potatoes, onions, carrots).

Procedure: 1. Put a few fruits and vegetables on a tray (start with a small number and those that you think the children might be most familiar with). Hold the tray in front of the first child and ask him if he can find something that grows on trees. If a child chooses a fruit or vegetable that does not grow on a tree say, "This one does not grow on a tree, but there is one on the tray that does." Give him an opportunity to try again. As the correct item is chosen ask the child to name it.

2. Continue in the same manner asking the next child to choose an item that grows down under the ground. (If possible use carrots or onions with the top still intact.) Talk about the part that grows above ground and the part we eat that grows below the ground.

3. Now tell the children that some fruits and vegetables grow above the ground on plants or vines. Ask the next child to choose a fruit or vegetable that grows above the ground on a plant or vine. (This appears to be the most difficult concept for most children.)

4. After all of the fruits and vegetables have been classified in the above manner, again choose a variety of fruits and vegetables to put on the tray. Place the tray in front of a child and ask him to choose *every* fruit that grows on trees. Let the next child choose all that grow on plants or vines above the ground; the next, all that grow under the ground.

5. After the game use the fruits and vegetables. Cut them up raw for snack time or let the children make fruit salad and vegetable soup.

Variations and Use as a Teaching Tool:

1. As the seasons change throughout the school year, add a variety of less familiar fruits or vegetables (avocado, radish, tangerine, etc.) found on the produce shelves in the local supermarkets.

2. After the children's knowledge has been tested, use pictures cut from seed catalogues that show the children what various kinds of plants look like.

Cautions and Suggestions:

1. This task would ordinarily be tried only with older fours and fives. If it is obvious that the children have no idea where things grow, switch to just naming fruits and vegetables for a success experience.

2. Depending on the maturity level of the group, the fruits and vegetables growing above the ground on plants other than trees could be excluded in the original testing and could be added later after the teacher has helped children become familiar with this idea.

General Suggestions for Teaching About Plants as Food Sources

Studying plants as food sources can be done in three contexts: growing plants, shopping for food, and preparing food to eat. The first is difficult unless the children are in a year-round program or the teacher has the knowledge and the equipment to simulate greenhouse conditions. However, it is always possible to produce sprouts of various kinds; and in some climates greens, radishes, and carrots started inside will produce small vegetables before June. The process of growing something oneself, no matter how small, is the best lesson in food production.

However, much easier and almost as educational is going to the place where food is grown to buy it. The possibilities of doing this will vary with each community; but in most places a field trip to a farm, orchard, or a producing greenhouse can be arranged. If the trip can be arranged so that the children can actually dig the potatoes or pick the apples, oranges, or tomatoes that they buy, it is doubly exciting; if they cannot, they should at least be able to see someone else picking similar produce. (See *Field Trips*.)

Preparing fruits and vegetables can be a much more frequent activity; and books and pictures should be used which show how the particular food being cooked is grown. Older children might cook a whole meal and put pictures of how each of the foods grows on the bulletin board.

The above discussion has completely left out the role of food processing. When children seem to understand the sources of fresh fruit and vegetables, snack and meal preparation will involve the use of processed foods. The children should be given some experiences opening canned fruit and comparing it with fresh, baking their own bread and cookies, making butter, etc. Films may also be used for this purpose--actual visits to a cannery, mill, or bakery may be too overwhelming even for kindergarteners. Other processed foods such as macaroni, powdered sugar, and commercial cereals may be brought in; and the children could be asked to guess what plants the food grew on originally, and how the food was processed.

Activities for Teaching About Plants As Food Sources

Table-20	Sorting Dried Foods
Science- 1	Plants in the Classroom
Food-15	Cutting Up Fruits and Vegetables
F-16	Shelling Vegetables
F-17	Vegetable Soup
F-18	Acorn Squash
F-19	Fruit Salad
F-20	Applesauce
F-22	Cracking and Sorting Nuts
Miscellaneous- 5	(F) Trip to the Apple Orchard

Books

Krauss, Ruth; *The Carrot Seed*

(And use homemade books made from seed catalogues.)

ANIMALS

Concept Game for Diagnosis and Teaching

Concepts: Animals--their names, where they live, and their uses.

Materials: 1. Pictures of habitats cut from *Holiday* or a similar magazine, pasted on tagboard or cardboard (8½" x 11") and taped end to end so they can be unfolded to stand on a table. Include pictures of a farm; a zoo, jungle, or savannah; a wooded area (temperate); and water representing sea, lake, or stream.

2. Miniature zoo and farm animal reproductions, such as may be obtained from Novo Educational Toys and Equipment Corporation. (See the list of supply houses and equipment manufacturers in the Appendix.)

3. A picture collection of woods animals, a variety of fish, reptiles, and birds.

Procedure: 1. Stand the pictures of habitats on the table and have the children describe and name them. Say, "Different kinds of animals live in different places." If the zoo picture is used instead of the jungle and/or savannah, tell the children that some animals live in zoos in this country, but that they come from jungles or grassy places in faraway countries.

2. Tell the children that you have a box of interesting animals. Each wants to go home, and the children are to help get them there. If the box of animals is hidden prior to giving each child an animal, the child's interest is held while anticipating the next animal. Now give the first child an animal, ask him to name it and then to put the animal in front of the place that he lives. Continue in the same manner until all animals have been located.

3. Remove the pictures and most of the animals, retaining the cow, steer, pig, chicken, and lamb.

Now hold up the cow and ask, "What food do we get from this animal?" Continue in the same way with each animal, talking about shoes and sweaters as well as milk, beef meat, pork meat, chicken, and eggs.

Variations and Use as a Teaching Tool: These materials are excellent for beginning discussions on such topics as what animals eat, the difference between wild and tame or domestic animals, the kinds of work animals do for man, animals found in the child's immediate environment, the role of the farmer or rancher related to the child's needs, and the purpose of zoos. Discussion could also lead to the interesting habits of specific animals, such as hibernation, hunting and storing food, and carnivorous versus herbivorous eating habits.

Cautions and Suggestions: 1. Be aware of those children who may be frightened by animals, either domesticated or wild, and discuss the real necessity for caution around most animals.

2. We were unable to find commercial reproductions of woods animals, fish, and many reptiles and birds. These areas should not be neglected; and it is necessary to collect pictures for this purpose. The procedure remains the same, pictures being substituted for the reproductions. Relative size is a problem when using pictures; whenever possible pictures should be in proper scale so that the children do not get ideas such as that bears and rabbits are the same size. When this is not possible, the discrepancies should be discussed with the children.

General Suggestions for Teaching About Animals

Unlike some of the areas we have discussed, the teacher will have no problems either in arousing interest or in finding materials about animals. The difficulties lie rather in making decisions as to which experiences to offer children and how to achieve some order in them. The diagnostic task will give the teacher a rough idea of how much her children know in certain areas, but will probably still leave questions as to where to start and which direction to go.

We would like to suggest that the teacher begin with the animal life which can be found immediately around the school and try to set a framework for looking at all forms of animal life by helping children to explore such questions as, "What is it called? What does it look like? How does it move? Can I pick it up to look at it? Where does it live? What does it eat?" Have the children try to give answers to as many of these questions themselves as is reasonable, depending on the animal and its situation. Three-year-olds can give a simple description; but the teacher must serve as a primary resource, perhaps also bringing in books with clear, simple illustrations. With four-year-olds the children can supplement direct observation by seeking for answers in picture books or by asking someone. Fives might go to the library or to a science teacher for more help. When considering the animal life in or close to the school, the teacher should be sure to look at all possible forms. While the obvious animals near the large city school may be limited to pigeons, starlings, dogs, cats, rats, mice, and an occasional squirrel, many simpler forms of life may be found by looking under rocks or digging a hole in any available plot of dirt.

Once the children are thoroughly familiar with the kinds of animal life around them, the next step would be going beyond the school environment to see other animals where they live, with the same basic questions being raised. Such visits can be supplemented by bringing animals into the classroom. Only when children have built up a framework of ideas about animals through direct experience will the teacher want to spend very much time in studying about the more exotic animals such as elephants, giraffes, and alligators, by the use of books, movies, or slides.

As has been noted in the discussions of other areas, many concepts may be taught by relating them to the study of animals--for example, nutrition, ways of moving, weather, etc. However, two areas should be mentioned particularly. The first of these is the concept of life--or of the contrast between living and nonliving things. This is a difficult distinction for threes, but fours can usually understand, for example, that real animals are alive while toy animals are not. Fives can think seriously about the question of whether all things that move are alive and offer some good reasoning as to why a car or a windup dog are not alive. Teachers also can help children to think about the question of life extended to the plant kingdom.

The second area is that of fact-fantasy. This area is discussed in detail later in this chapter, but is mentioned here because it seems to us particularly relevant to the study of animals. Children are faced with the entire range of reality-unreality in books and television when it comes to animals, from "straight" nature stories, through those in which animals act like themselves but think and talk like humans to those where the animal is essentially a human with an animal mask. The latter can provide much enjoyment for children; but the teacher should be quite specific in noting before or after the story, "That was just pretend, wasn't it? Animals can't really do those things."

Activities for Teaching About Animals

Large Motor-15	Move as the Animals Move
Science- 6	Animals in the Classroom
S- 7	Observing Birds
S- 8	Animal Maze
S-24	Magnifying Glass
S-25	Sea Box, Rock Box
Food-14	Eggs

Books

Andrew, Martin; *Forest Animals*, *Water Life*, *Wild Animals*
Bannon, Laura; *Red Mittens*

Beskow, Elsa; *Pelle's New Suit*
Brenner, Barbara; *The Five Pennies*
Brown, Margaret Wise; *Wheel on the Chimney*
Cole, William; *I Went to the Animal Fair*
Conklin, Gladys; *I Caught a Lizard, If I Were a Bird*
Craig, Jean M.; *Spring Is Like the Morning*
Croxford, Vera; *All Kinds of Animals* (Out of print; try library.)
Evers, Helen and Alf; *Copy Kitten* (Out of print; try library.)
Flack, Marjorie; *Angus and the Cat, Angus Lost*
Francoise, Jeanne; *Marie Counts Her Sheep*
Garelick, May; *Where Does the Butterfly Go When It Rains,*
What's Inside?
Glasgow, Aline; *Honschi*
Green, Mary McBurney; *Everybody Has a House and Everybody Eats*
Hess, Lilo; *The Timid Sheep*
Hader, Berta and Elmer; *The Big Snow*
Huntington, Harriet; *Let's Go Outdoors, Let's Go to the Brook,*
Let's Go to the Seashore
Ipcar, Dahlov; *Ten Big Farms*
Keats, Ezra Jack; *Whistle for Willie, Hello cat, The Pet Show*
Knotts, Howard; *The Winter Cat*
Lane, Carolyn; *The Voices of Greenwillow Pond*
MacDonald, Golden; *Whistle for the Train*
Machetanz, Sara and Fred; *A Puppy Named Ghi*
Parsons, Virginia; *Homes*
Pfloog, Jan; *Wild Animals and Their Babies*
Selsam, Millicent; *Plenty of Fish*
Tresselt, Alvin; *Wake Up Farm, Autumn Harvest, Sun Up,*
I Saw the Sea Come In
Wright, Dare; *Look at a Gull*
Ylla; *Polar Bear Brothers*
Zolotow, Charlotte; *Sleepy Book*

HEALTH AND NUTRITION

Concept Game for Diagnosis and Teaching

Concepts: Health concepts (the roles of doctors and nurses and the functions of familiar medical equipment and medicines) and food values.

Materials: 1. Dolls or pictures of doctors and nurses; medical tools including a thermometer, tongue depressor, stethoscope, and a toy syringe; medicines such as one or two aspirins in an aspirin bottle and a bottle of cough medicine.

2. Three cards with pictures of foods pasted on them: one with a bottle of soft drink and a glass of milk, one with a hamburger (or other meat) and a candy bar, and one with a fresh fruit and another form of candy.

Procedure: 1. Show the group the doctor and nurse pictures or dolls and see if they can name them. Continue, "Yes, this is a doctor; and this is a nurse. They have a very special kind of job. What is their job?" Try to elicit the idea that doctors and nurses are people who try to keep us well and try to make us well when we get sick.

2. Now tell the children that you are going to show them some things that a doctor uses. Show the children the thermometer and see if they can name it. If they cannot, tell them it is a thermometer and then ask them what it is for. If they do not know the function, tell them it is used to take their temperature. "This thermometer tells the doctor or your mother if you are hot or if you are just right." Show them the silver mercury and explain if the silver comes up very high on the thermometer it means you have a fever and you probably do not feel very good. If the thermometer is easy to read you might demonstrate how the mercury rises by putting the thermometer into warm water. (Be careful that the water is not so hot it breaks the thermometer.)

Now show the tongue depressor. Most children refer to this as a "stick." Have enough tongue depressors available so the children can demonstrate its use. (The teacher should always hold the tongue depressor so that no one injures themselves.) After the children have demonstrated, say, "Yes, the doctor tells us to open our mouths and say, 'Ahhh.' Why does he do this? What is he trying to find out?" Try to establish the idea that the doctor wants to see if you have a sore throat. Ask if any of the children have ever had a sore throat and if so where did it hurt.

Next show the stethoscope. Most children will not be able to name this. Tell them the name and then ask how the doctor uses it. Try to establish the idea that the doctor is listening to the heart and to the breathing. Give each child an opportunity to use the stethoscope and listen carefully to his own heart.

Show the play syringe. Most children will call this a shot. Ask the children if they know what is inside the real shot or syringe that the doctor has. If the idea can be established that there is medicine inside, then ask the child why he sometimes has to take a shot. Try to establish the idea that sometimes we take a shot because the medicine will make us well and other times the medicine will prevent us from getting sick.

3. Bring forth the two bottles of medicine. See if the children know that one bottle contains pills and the other a liquid medicine (cough medicine). First ask the children why we sometimes take pills or medicine. Be aware that many children might be familiar with vitamins so that pills are not only taken when we are sick but also taken to help us from getting sick. Discuss the real danger of becoming sick if too much medicine is taken. *Stress the idea that no medicine should be taken unless it is given by an adult.*

4. Hold up the first card, and ask one child to point to the drink that is good for us. If he points correctly, ask why we need milk. Try to elicit answers such as "It makes us grow," "For our teeth," etc. Do the same with the other two cards.

Variations and Use as a Teaching Tool:

1. Children may wish to discuss some recent illness. Guide the discussion with such questions as "What made you sick? What did you do to get well? Where did it hurt? Did you visit the doctor? What did he do?"

2. Children often seem to have great misconceptions and little knowledge about these concepts. Often this task becomes primarily a teaching game.

Cautions and Suggestions: 1. Help the children become alert to the dangers as well as the benefits of medicine. Parents should be notified before this game so they will be aware that the child may be curious about medicine at home. This is a good time to remind parents of the dangers of leaving any medicine where children can get it.

2. Know the laws of your state. In New York State, for example, it is illegal to be in unauthorized possession of an actual syringe.

3. With the nutrition questions, try primarily to find out how much children know. It is hard to use these cards as a teaching tool without "lecturing" the children, and would be much better to teach nutrition in more real situations.

General Suggestions for Teaching About Health and Nutrition

In teaching about health and nutrition (and safety), as in teaching children to share or to take turns, one must often guard against a tendency to give a moral or an emotional atmosphere to the topic. Research done on children's ideas of the causes of illness has shown that many of them have already gotten from home the idea that they become ill because of something that they have done or not done--usually going out without a coat on or failing to wash their hands. A few connect becoming ill simply with "being bad."

We do want to give children some clear, basic facts to protect them against illness and accident. But we also want to lay the groundwork for a genuine understanding of how the body works; what illness is; and the roles played by doctors, nurses, and medical procedures in preventing and curing illness. As with other concepts the best opportunities for such teaching are in connection with the ongoing school activities. The "lecture approach," which the testing games might tempt one to use, is far less effective than an occasional clear comment at the right moment. These comments need to be phrased in terms of the age level of the group, and can be elaborated if the children show interest. (The teacher can, of course, on occasion set up teaching situations if they have not occurred naturally.) Thus, with regard to the need for washing hands before snack, the teacher might simply say to three-year-olds, "We need to wash our hands so our food will be clean when we eat it." More mature fours and fives may be ready for the idea that germs make us sick, though the teacher must be very matter-of-fact in her presentation, since the idea of invisible (to the child) things which cause illness may be very frightening to some.

Whatever level, however, the teacher must be sure that this distinction is being made clear: it is the dirt or the germs in the dirt which may cause the illness--not the *act of not washing.* The importance of this distinction may be seen more clearly perhaps in the situation of wearing proper clothing. The teacher should help the child to understand that getting chilled makes it more likely that germs can make him ill rather than seeing going without a coat as being directly causal. (As noted in an earlier section, the teacher may at times want to give the older child the responsibility of noting when he is becoming chilled or overheated so that he can begin to act on his own in protecting his own health.)

The teacher can help this matter-of-fact attitude by relating health practices to her own behavior as well as that of the children. She may say to them on a particular morning, "I'm sorry I'm sleepy this morning. I went to bed too late last night, and it's hard to do a good job of being a teacher when you're tired and sleepy"; as well as saying to a child, "Your mother told me you were up late last night; and I can see you're too tired to play very well. You can take a short rest on your rug, and you may feel more like going out later."

In giving information regarding medical examination and treatment, the teacher will, of course, be aware that she is dealing here with attitudes as well as information. Children usually make comments when they return from a checkup or an illness on which the teacher can build, but she can also arouse interest by bringing in nurse and doctor dolls or "uniforms" and play medical equipment for the doll play corner. In the course of such conversation the teacher should be alert to communicate such ideas as "Yes, doctors do have to hurt you sometimes; but mostly they help us to get well or stay well," or "The doctor is sorry when he has to give you a shot, but he knows it will keep you from getting the measles."

Children's fears about medical treatment can be helped by letting them play out the fears with dolls or as doctors or nurses themselves. There are also a number of good books about trips to the doctor, dentist, or hospital which help children by letting them know what to expect. (Many of these are in the 19-29 cents range--but be sure to read carefully before you use them with the class.) If you know that a child in your class will be undergoing hospitalization, urge the mother to find out and explain to the child as carefully and matter-of-factly as possible what will happen and what it means--without stressing the unpleasant aspects, but without misleading him by overemphasizing on ice cream and games. Many local hosptials have booklets for parents and children outlining what to expect.

In the field of nutrition, the teacher has a wealth of possible classroom experiences to utilize; but she may also have many misconceptions to combat as the result of TV commercials. Probably the most important ideas to get across are that the right foods help children to grow, to play hard, and to stay healthy. The use of a variety of types of food at snack time can be accompanied by such comments (where appropriate) as, "We have milk for snack today--it's one of the things that makes us grow and have strong bones," or "Orange juice is better for us than pop because it has more vitamins in it that help us stay healthy." Raising of plants and animals in the classroom also provide an opportunity for pointing out that plants need food to grow or that certain foods (such as rabbit pellets) are better for animals than a diet of cookies because they contain the things the animals need to grow.

Activities for Teaching About Health and Nutrition

Some of the activities listed below simply provide good opportunities for discussing health concepts.

Adequate Clothing

Large Motor-11	Outdoor Snow Play
LM-37	Water Play
LM-39	Painting with Water
Science-13	Weather Report
S-14	Weather Doll

Excercise

Large Motor- 1	Obstacle Course
LM-10	Playing in an Open Meadow
LM-14	Gymnastics

Medical People and Procedures

Social Science-18	Doctor Office and Hospital

Need for Sleep

Table-23	Sorting Day and Night Pictures

Proper Food

Science- 1	Growing Plants
S- 2	Measuring Plant Growth
S- 6	Animals in the Classroom
S-10	Visiting Baby
Social Science-12	Restaurant

Books

Bemelmans, Ludwig; *Madeline*
Brown, Margaret Wise; *The Noisy Book*
Green, Mary McBurney; *Everbody Has a House and Everybody Eats*
Hoban, Russell; *Bread and Jam for Frances*
See also the *Let's Read and Find Out* series by Thomas Crowell.

SAFETY

Concept Game for Diagnosis and Teaching

Concepts: Safe and dangerous use of objects.

Materials:
Sharp pencil - crayon
Can of juice - cleaner bottle marked poison (empty)
Pointed scissors - blunt scissors
Matches - small flashlight
Knife, fork - wooden spoon
Rock - rubber ball
Medicine bottle containing two aspirin - box of candy or dried fruits
Electrical extension cord - string
Iron - egg carton
Rope - yarn
Plastic bag - paper bag
Traffic light, made by pasting colored circles on tagboard

Procedure:

1. Ask the children in general if they know what the word "dangerous" means. Encourage a short discussion on dangerous situations as related to the individual child. Establish that something dangerous is anything that might hurt you.

2. Now tell the children that you are going to show them some things that could be dangerous and some things that are probably not dangerous. Place the pencil and the large blunt crayon on a tray and put in front of one child. Ask, "What thing on this tray could be dangerous?" or "What thing on this tray must you be careful with because it could hurt you?" If the child does choose the sharp pencil try to elicit how the child would prevent it from being harmful. Ask how he could use it so it would be safe. In each case stress what the child *should* do with the dangerous item rather than how it would hurt him. This is both to prevent undue anxiety and also to discourage experimentation. The type of answer which the teacher is trying to get in each case is:

Sharp pencil--just use it at the table, carry it point down; *scissors*--just use it at the table, carry it point down; *poison bottle*--if you see one, tell a grown-up to put it up high; *matches*--give them to your mother or the teacher; *knife, fork*--just use at the table; *rock*--do not ever throw it; *medicine*--

take it only when your mother tells you to; *electrical cord*--do not touch plugs; *iron*--stay away from hot irons; *rope*--ropes are to be tied to wagons and trikes, not to people; *plastic bag*--ask a grown up to put it away where little children cannot reach it.

Obviously obtaining such answers may require a good deal of questioning. If children seem quite unaware of the proper use of dangerous items, although they know which *are* dangerous, don't push; but plan to continue with teaching on this topic.

Continue in the same manner, placing two items on the tray at a time and letting each individual child respond. If the "safe" object is chosen, give the child a chance to tell you why he chose it. For example, he might choose the crayon because his mother got angry when he drew on the walls, etc. However, make the distinction between those things we are not allowed to do for other reasons than that it might prove dangerous or harmful.

3. Finally, hold up the traffic light. First ask the children if they know what it is called. Try to elicit "traffic light." Point to the red circle representing the red light, and ask the children, "When the traffic light shines red, what is it telling us to do?" If the response is "stop," ask why the light is telling us to stop. Conclude that we must stop so we will not get hit by a car. We must stop if we are driving, so we will not hit a person or another car. Continue with a discussion of the yellow and green lights and what they tell us to do.

Cautions and Suggestions:

1. When discussing dangerous objects, one is always concerned about the adventurous child who may be tempted to try something just to see if the teacher is right. The dangers of this are certainly not as great as the uninformed child who might hurt himself accidentally, but it would be well to alert parents to your intention to use the test before you do so--or better yet to integrate the experience at school with a safety campaign at home. Bringing in statistics on accidental injuries, poisonings, etc. to preschoolers might be very appropriate for a parents' meeting.

2. When certain of the objects are introduced (plastic bag, bottle of medicine, cleaning agent, etc.) children may say that they can kill you or you die from them. Be aware of the children that this might frighten. We

> found no problem if it was handled in a matter-of fact way by saying, "Yes, that could happen; and you might also get sick and have to go to the hospital." (The teacher should, of course, not introduce the idea of dying.)

General Suggestions for Teaching About Safety

Like health and nutrition, safety is a topic which must be approached carefully. Again, because of concern for children's well-being there may be a tendency either to lecture, which is ineffective, or to emphasize frightening consequences of lack of safety practices. If safety rules are considered a topic like any other, to be approached at appropriate times when the children are likely to be interested, one can avoid either boring or frightening the children. As noted in the cautions for the diagnostic task, a teacher is also better off if she emphasizes the proper way of using dangerous objects rather than the results of improper use.

Thus, "To be safe, carry knives with the points down" instead of "Be careful, you'll cut yourself," or "Ask the teacher if you want the phonograph moved; unplugging electric cords is a job for grown-ups." The teacher does not avoid answering if the child asks why, or what will happen to him if he does something which is for adults only; but she should be realistic. If a child asks what will happen if he pulls out an electric cord, she might say, "Probably nothing would happen, but you *might* burn yourself or give yourself a shock." On the other hand, referring to why not to drink cleaning supplies the teacher can be equally truthful and say, "It would make you very, very sick."

Actually, it requires only occasional matter-of-fact statements such as these, rather than specialized teaching materials to alert children to the more usual dangers. However, there are two kinds of teaching about safety which are of equal importance. One is the continuous alerting of staff and parents to be sure that they reduce the possibilities of accident by always seeing that dangerous fluids, knives, sharp scissors, etc. are kept up out of the way until they are sure that children are old enough to use them sensibly. (In most cases this means grade school age.)

The other type of education involves helping children learn to be conscious of possible danger to others in their daily play activities. Children can be reminded, "Watch where you run so that you don't bump," "Tricycles go all the same way," or "No block towers higher than your shoulder." By having sets of simple rules, easily understood by children and repeated when appropriate in the same words by all participating adults, children can become conscious of their responsibilities in the safety of their friends. Commenting to a child, "You're being very careful with the ball, aren't you?" when he seems to be watching out for others may help him to remember the next time he might tend to become careless. Above all, teachers themselves need to be conscious of the models they provide for future safety habits--taking hold of the electric plug instead of jerking the cord to pull it out, or being sure that pans on the stove always have handles turned toward the back.

Activities for Teaching About Safety

As with health and nutrition, teachers should be ready to use any activity appropriate for informal and low-pressure teaching on safety. (See especially the safety comments in Chapter 11, Health and Safety, as well as individual comments on each activity for ideas as to appropriate cautions.)

CULTURAL SIMILARITIES AND DIFFERENCES

Concept Game for Diagnosis and Teaching

Concept: Cultural similarities and differences. (For four- and five-year-olds only.)

Materials: Six to eight pictures of children in dresses of various countries, showing variations in climate and life style (e.g., Eskimo, Balinese, American Indian, African, etc.) pasted on a large sheet of cardboard. The pictures can be cut from *Holiday, National Geographic*, etc.; they should be realistic and pleasant, not frightening or caricatures.

Procedure: 1. Hold up the cardboard and say, "Here are a lot of children. They're all alike because they all like to play and have fun. But they're different in some ways, too. How are they not alike?" Try to elicit clothing responses, and then ask, "Why do you think they wear different clothing?" If the children seem to understand that the differences result from the fact that the children in the pictures live in different climates and countries, ask if they can guess what countries or climates they come from.

2. Finally ask, "If all these children got on airplanes and came to the same party, could they talk and understand each other?" (If, "No," ask, "Why not?")

Cautions and Suggestions: Our use of this task has seemed to show that in most cases children who are aware of cultural and language differences verbalize them quite readily. If not, there is no point to pushing the questioning very far. Rather the teacher might say, "Some of them have different kinds of clothes on, don't they? I wonder if some live where it is very cold and some where it is hot?" and leave it at that.

General Suggestions for Teaching About Cultural Differences

Our major interest in giving young children information about people from other cultures is not to have them learn many specific facts about foreign countries, but rather to teach that differences in people are interesting and worthwhile rather than something to be frightened of or made fun of.

Thus, the best starting place for introducing elements of foreign culture is whatever aspect of some culture the teacher feels the children are likely to find interesting and enjoyable. In one case this may be having the mother of one of the children prepare food from her native country or wear a native costume to school. In another, it may be going to see a play or some folk dances put on by an older group of children. In still another it may be discussing the place that a child or a teacher is going to visit in the summer. In each case the teaching should stress the familiar and the similarities among people over the foreign and the differences.

Thus, especially in this area where attitudes are so much more important than facts, the teacher should follow the leads of the children. Perhaps she will only bring in an occasional book or film for younger children who show only minimal interest. However, she might spend several weeks on the culture of Japan, for example, with a group of kindergarteners motivated to make their own kimonos, cook a Japanese dinner, and build a paper house.

There are many excellent books for children providing child and animal characters from foreign countries with whom they can identify--*Little Sister* and her birthday, *Madeline* and the dollhouse from Papa, *Ping* and his wish for his own houseboat on the yellow Yangtse River. The imaginative teacher can also provide field trips, props for role playing, art projects and cooking projects relating to whatever country the group wishes to focus on.

Activities for Teaching About Cultural Similarities and Differences

Table-21	Sorting Foreign Coins
Food-10	Foreign Foods

Books

Ayer, Jacqueline; *A Wish for Little Sister, Nu Dang and His Kite*
Bemelmans, Ludwig; *Madeline, Madeline's Rescue, Madeline in London*

Beskow, Elsa; *Pelle's New Suit*
Brown, Margaret Wise; *Wheel on the Chimney*
Copeland, Helen; *Meet Miki Takino*
Ets, Marie Hall; *Nine Days to Christmas, Gilberto and the Wind*
Fatio, Louise; *The Happy Lion, etc.*
Flack, Marjorie; *The Story About Ping*
Francoise; Jeanne; *Marie Counts Her Sheep,*
What Time Is It, Jeanne-Marie?
Glasgow, Aline; *Honschi*
Kesselman, Wendy; *Angelita*
Leaf, Munro; *The Story of Ferdinand*
Lindgren, Astrid; *Of Course Polly Can Ride a Bicycle,*
The Children of Noisy Village
Machetanz, Sara and Fred; *A Puppy Named Ghi*
Morrow, Suzanne; *Inatuk's Friend*
Sutherland, Efua; *Playtime in Africa*
Yashima, Taro; *Crow Boy*

FACT AND FANTASY

Concept Game for Diagnosis and Teaching

Concept: Fact and fantasy.

Materials: Pieces of real fruit, and a good plastic replica of each (orange, peach, grapes, pear, etc.); a real flower and a good plastic replica; *good* illustrations from a dimestore Mother Goose book, cut out and pasted on cardboard. (See the cautions below.)

Procedure: 1. Place the real and artificial fruit and flowers on the table. (Limit to one fruit at a time with three-year-olds.) Say, "Here are some things that are real and some things that are just *make-believe*; they're not real." Ask each child in turn to find the real fruit and the fruit that is not real. Name the fruit and use the words "make-believe," "artificial," "not real," "just pretend," etc. If the children don't answer readily, hand them the objects and ask, "How can you tell which is real?" Encourage them to look, feel, and smell (though not to taste).

2. (For four-, five-, and *very mature* three-year-olds.) Show the Mother Goose illustrations one at a time to the group. Say, "Here are some pictures that are real, that can happen, and some that are make-believe; they can't really happen." As you hold up each picture, say a sentence that gives the idea of it, for example "There was an old woman who *lived in a shoe*," and ask "Could that really happen?" A suggested list follows:

Real	Make-Believe
Deedle Deedle Dumpling, My Son John	Peter, Peter, Pumpkin Eater
Old Mother Hubbard	Hey Diddle Diddle, the Cat and the Fiddle
Pat-A-Cake	There was an Old Woman Who Lived in a Shoe
Little Jack Horner	Old Mother Goose, When She Wanted to Wander

If the children seem to have difficulty, talk about the picture and discuss the specific things in the picture that are real and those that are make-believe. Give the child a chance to tell *why* he thinks the picture is real or make-believe.

Variations and Use as a Teaching Tool: If children distinguish easily between real and unreal Mother Goose rhymes, the teacher can bring pictures from other books and discuss with the children whether they can really happen or are "just pretend."

Cautions and Suggestions: 1. Choice of the Mother Goose pictures must be made very carefully to be sure that the specific picture is very clearly either real or not real and that there is not distracting details.

2. Children are often confused as to the reality of things they have seen on television. If they say, "A cow *can* jump over the moon, I *saw* it on television," the teacher might say, "But if you went to a real farm and saw a real cow, could *it* jump over the moon?"

3. *Most threes and some fours seem to have great difficulty with concepts of reality when the problem goes beyond concrete objects such as artificial and real fruits.* Children should not be pushed to make such distinctions before they are ready.

General Suggestions for Teaching About Fact and Fantasy

Helping children distinguish between fact and fantasy or reality and unreality can be important to their later adjustment; but the teacher needs to use care in her approach. Children are living in a world where fantasy and fact are often confused, due partly to the child's lack of experience and partly to the influence of television which makes no distinction between things that can and cannot happen. The teacher wants to help the child develop a clear idea of what is real and what is not real. On the other hand, a major concern is to have the child remain flexible, imaginative, and creative. She wants him to be able to enjoy fantasy as one of the real satisfactions in life, and she wants to avoid giving the feeling that being imaginative is something bad.

Perhaps the simplest way is to preface or follow each story which children are told or read by the simple statement that "This is a story that really happened to us." (If it is a retelling of some experience the children themselves have had.) "This is a story that could happen to children like you," or "This is a story that couldn't really happen--it's just fun to pretend." Thus, the teacher gives equal value to the child's own experience, to the enjoyment of the experiences of others, and to the fun of make-believe.

For three-year-olds, this is probably all the teacher should do, since threes often have great difficulty in making really clear distinctions between reality and unreality, and are particulary bothered by the problem that something can be unreal which they themselves have seen on television or in a book. (The majority of stories for three-year-olds or for older children of limited experience should probably deal with reality; and their imaginative fare should be quite simple and easily understood to be "pretend.")

For four- and five-year-olds, the teacher can go further and have children make up pretend stories or tell about things that really happened. Children at this age also enjoy "silly games" in which the teacher asks them a series of questions, for example, "Could a dog be green?" or "Is there such a thing as a pushma-pullya?" or "Can you get milk from a cow?" Such games can give the child a chance to think very seriously about what is real and unreal.

The same kind of discussion can be done with real and unreal pictures, using illustrations from books, comic books, etc. Mature fours are usually able to say whether something could or could not happen and, if not, why not.

Much of the humor that children enjoy relates directly to questions of unreality. Basically, the simplest form of humor is to put together two discrepant ideas, for example, as in a song which children find hilarious, "Did you Ever Wear a Sock on your Nose?" Children's jokes are frequently not funny to adults; but the teacher should realize that in making up their own jokes, children are learning to deal with reality and unreality by resorting to humor.

For the child who tends to have problems discriminating reality, or tells untrue things as if they were true, the teacher must be very careful to avoid making him feel he is doing something wrong. The teacher should simply ask, as clarification, "Was that something that really happened or are you having fun pretending?"

Activities for Teaching About Fact and Fantasy

Large Motor-29	Looking at Cloud Shapes
Language- 3	A Child's Own Book
L- 4	Making a Book
L- 5	Acting Out Stories
L- 6	Puppets

Books

Aliki; *Keep Your Mouth Closed, Dear*
Amos, Berthe; *By the Sea*
Anglund, Joan; *The Cowboy and His Friend*
Binzen, Bill; *Rooftop Hogi*
Brown, Margaret Wise; *The Runaway Bunny*
Burton, Virginia Lee; *Mike Mulligan and His Steam Shovel*
Craig, Jean; *Boxes*
DeRegniers, Beatrice Schenk; *A Little House of Your Own*
Ets, Marie Hall; *In the Forest*, *Another Day*
Fenton, Edward; *Fierce John*
Galdone, Paul; *Old Dame Trot and Her Comical Cat*
Hoban, Russell; *Bedtime for Frances*, *Bread and Jam for Frances*, *A Baby Sister for Frances*, *A Birthday for Frances*
Itse, Elizabeth; *Hey Bunny!*
Johnson, Crockett; *Harold and the Purple Crayon*
Knight, Hilary; *Where's Wallace?*
Krauss, Ruth; *The Carrot Seed*
Minarik, Else *Little Bear*
Ness, Evaline; *Old Mother Hubbard and Her Dog*
Payne, Emmy; *Katy No Pocket*
Randell, Beverly; *The Mouse Who Learned to Read* (Out of print, try library.)
Seuss, Dr.; *Horton Hatches the Egg*, *And To Think That I Saw It on Mulberry Street*
Turkle, Brinton; *The Sky Dog*
Wright, Dare; *The Little One*

SIGNS AND SYMBOLS

Concept Game for Diagnosis and Teaching

Concept: That signs and symbols stand for ideas.

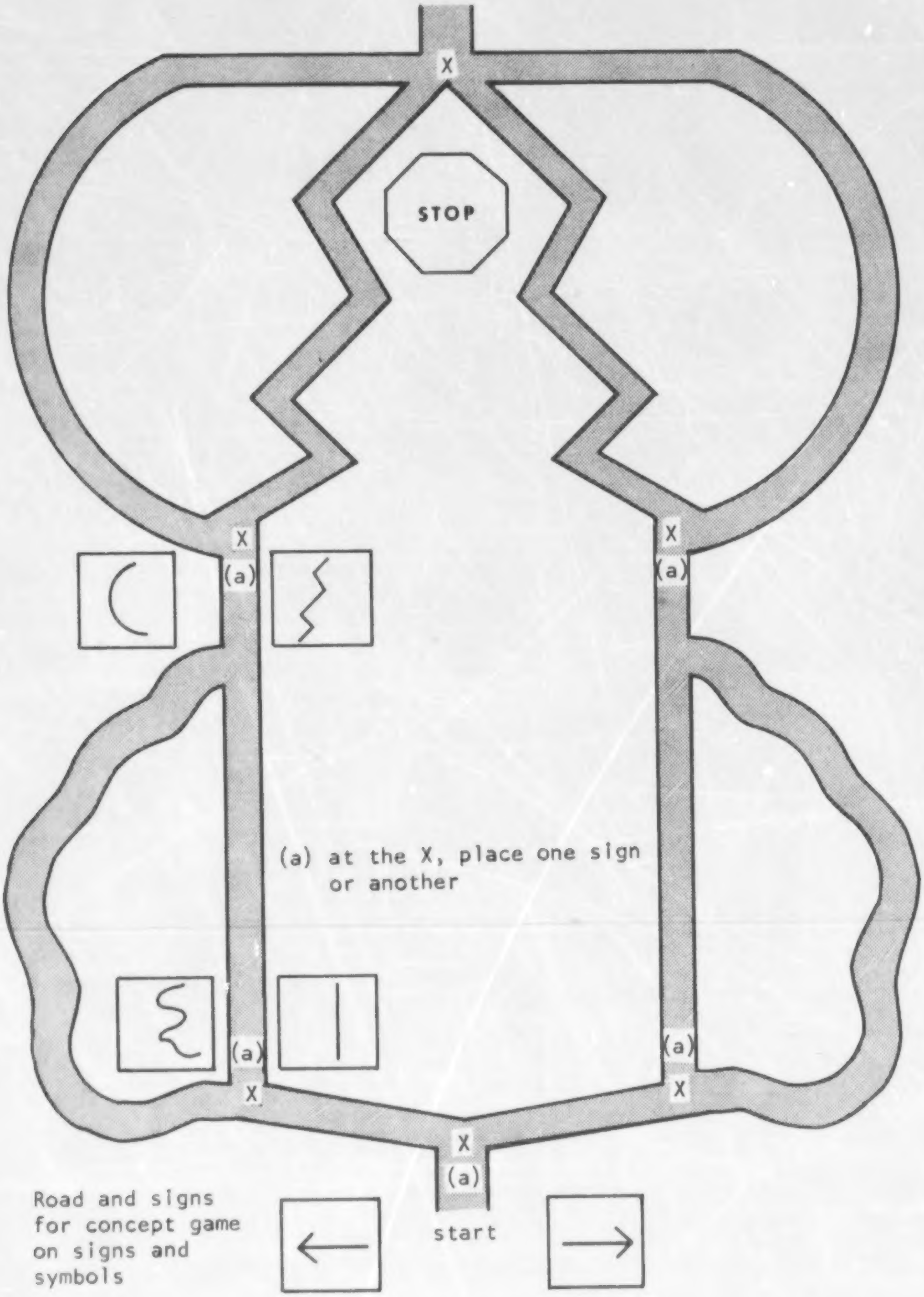
Materials: Signs: Very small toy cars (one for each child and one for teacher); small road signs made from tagboard or durable paper and backed with a bent paper clip so they stand; and a road taped to a table top or drawn with magic marker on paper. (See illustrations below.)

Symbols: Symbol cards drawn with magic marker on 12" x 12" sheets of heavy paper. (See illustrations below.)

Procedure: Signs

1. Show the children the "road" and tell them that each one is going to take a trip by driving his car along the road. Explain that different signs are going to tell each car what to do and where to go until it finishes its trip. Then put appropriate road signs at each choice point (only one sign at each point) and begin to follow the road. Whenever you come to a choice point (marked with X--see illustration below), ask the children to tell which way the little car should go. If there is no response, for example to the curved line, say, "Look, one road is curved and one road is straight. Which one do you think the sign is telling my car to take?" This is repeated each time as necessary. If the children still seem to have difficulty with the concept tell them, "This sign shows a curve and this is the curved road so I will take the curved road and not the straight one." Demonstrate the curve by running your finger along the curved road and the curved sign. Always have the stop sign placed at the end of the road. (This sign should be very close in appearance to a real stop sign.)

2. The teacher then gives each child a car and in turn he travels along the road following the signs set up for him. The teacher changes the signs for each child to assure his response to the sign rather than to memory of the previous child's trip.

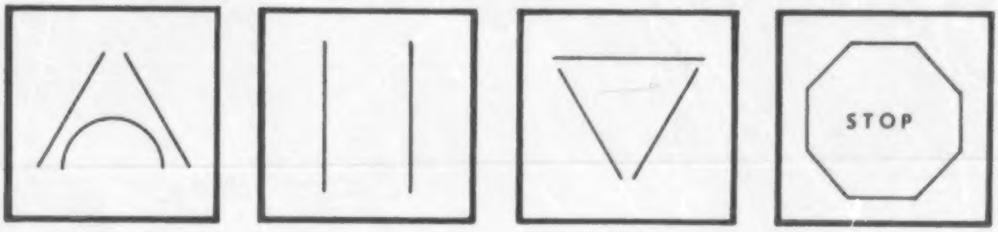

X
STOP
X
X
(a)
(a)
(a)
(a)
X
X
X
(a)
start

(a) at the X, place one sign or another

Road and signs for concept game on signs and symbols

Symbols

When the children have mastered the game with the cars, usually on another day, the teacher tells the children about a game in which the signs tell the children what to do themselves. Show the children the first sign and tell them it means to put your hands on your head. (See illustration.) Have them do this action. Show the second sign and tell them it means to raise their arms straight up in the air. Demonstrate and have children do the same. Go back to the first sign and ask the children if they remember what that sign is telling them to do. If they do not remember, tell them and demonstrate. If the children are ready to go on, introduce the third sign and tell them it means to fold their hands and put their arms on the table. Demonstrate and have children do the same. Now the teacher tells the children they are ready to play the game. Hold up one card at a time, changing them at random. Begin slowly at first and move to as fast a pace as the children are able to respond to. When the game is over or the children seem to be losing interest, pull out the stop sign and see if the children respond immediately by stopping their play. Ask the name of this sign and what it is telling the children to do.



Symbol cards for concept game on signs and symbols

Variations and Use as a Teaching Tool: The children tested enjoyed both of these games. Some fours can play the games by themselves after the test. If it seems appropriate, the symbol game can be expanded to include more cards. One group of fours played with eight cards.

Cautions and Suggestions: 1. Pass out a car to each child to take the trip after the demonstration by the teacher with her car. Tell those who are waiting to take their trip they may play quietly with their car until it is their turn.

2. Have a variety of cars and trucks so no child is disappointed with the vehicle he has chosen.

3. Mark the back of the symbol cards so you are familiar with the one being shown at the time. This will facilitate seeing those children who are having difficulty as the game is speeded up.

General Suggestions for Teaching About Signs and Symbols

The basic concept tested in the first half of the above concept game is that signs may tell us to do things with words or with pictures. Children may be introduced to this idea by pointing out various signs to them on walks or field trips, if what is said or meant is relevant at the moment. For example, a teacher might point out a sign on a trip to the library which says, "Please be quiet in the library," and might ask children if they could think of a picture which could say the same thing. Looking at traffic signs the children could be asked to guess the difference between "stop" and "yield" signs, and when they understand this, to think about how they could tell the difference between the signs if they cannot read the words "stop" or "yield."

Since there is currently a shift in many areas to the European type of signs using pictures only, it might be possible to get a display of such signs and talk with the children about them. For example, the teacher could ask them to guess the meaning of a picture of a bicycle with a black line across it.

The second concept tested is that symbols do not always look like the things they represent. (In technical speech this is the difference between a sign and a symbol.) The second part of the concept game might then be introduced, pointing out to the children that the signs to put your hands on your head in the first version looks a little like hands on your head (and so on through each card). In the next version, children could make up symbols which had no relationship to what was to be done. This can then be related to the

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use of letters for sounds--the letter doesn't really look anything like the sound; but we know that, for example, "P" stands for "puh."

In this area we are interested in teaching that a shape or a letter can stand for a sound or a concept. This is obviously necessary before a child can understand the process of reading, and it is also basic to the writing of numbers. Our use of this task seems to indicate that children are able to understand this very easily and to make use of simple "symbolic communication." If children are able to master the symbols in the task and enjoy the game, they can move on to "reading" and "writing" two-word messages, or using a symbolic sign language in their play.

Some teachers have found that children can remember geometric symbols to label their belongings before they are able to discriminate their own names; and both names and symbols can be used on lockers, etc. Symbols may also be used to give practical information such as how easy a game or a puzzle is. For example, X on the box could indicate easy; XX, harder; and XXX, very hard.

If some children become intrigued with the idea of symbols, as often happens with kindergarteners, one can bring in symbols from many different sources and encourage them to look for more. Examples might be those from Indian art (try Camp Fire Girl or Scout manuals), semaphore and signal flags used on ships, symbols on the typewriter, the stars and stripes on the flag, the peace symbol, hand signs used by the deaf, etc. The concept that some symbols stand for ideas or words and others for sounds might be introduced either through the difference between signal flags and semaphores or through the difference between English letters and Chinese characters. (All of these advanced concepts, of course, depend on readiness and interest on the part of the child.)

Books

Carle, Eric; *The Secret Birthday Message*
Funk, Tom; *I Read Signs*
Raskin , Ellen; *Nothing Ever Happens on My Block*

Chapter 9

Planning for the Individual Child and for the Group

Introduction

In the sequence of the Diagnostic Approach this chapter builds on Chapter 3, which discussed record keeping, scheduling, and a simplified approach to assessment of needs when staff and time are limited. (Be sure to read Chapter 3 first.) The present chapter also builds on the detailed diagnostic tasks and the descriptions of planning for each area which were presented separately in Chapters 4 through 8.

At this point let us emphasize again that many of the suggestions for teaching contained in the earlier chapters will be useful for program planning even if a teacher cannot keep detailed records on her children. While this present chapter is organized around the complete set of diagnostic procedures, it also includes many ideas which should be useful to any teacher in planning for her group and for individual children.

General Suggestions for Program Planning

It is a real challenge to plan and carry out a program which fits the needs of the group within the limits of the teacher's skill, the budget, and the space available. Below we describe *one approach* to program planning.

Step One: Set a Time for Planning.

As we have said at various other points in this book, teachers need time to get to know each other and to discuss assessment of their children. They also need a regularly scheduled time each week (or more often) to plan their programs.

Grade schools have often been criticized for not making use of the diagnostic materials which they obtain on children--giving them test after test and then just filing them. The preschool or kindergarten teacher should not be guilty of the same thing. *Remember that the purpose of assessment is to plan for the child, not to label or classify him.* There is no point to spending the amount of time and effort which goes into careful study of each child in the group unless equal care is given to making use of the information. Unfortunately this takes time, just as the original diagnosis takes time. We have pointed out elsewhere that teachers need to help administrators understand that taking the time for diagnosis and planning is just as important a part of their jobs as direct teaching.

Step Two: Develop a Daily Schedule.

Obviously the teacher must be ready to teach anything at anytime regardless of schedule; for example, she would never hesitate to use an opportunity to work with a child on language development during outdoor play time. However, a rough daily schedule emphasizing certain areas of learning at certain times makes it much easier to be sure that all areas are being covered without having to keep each continually in mind. A daily schedule also makes it easier to plan ahead to be sure that everything is available for special projects and activities and to make the best possible use of staff time.

Although not all teachers would agree with us, we feel that the following types of divisions of the school day are desirable:

Free play inside. One or more periods of free play should be offered each day when children are free to choose any activity in the classroom. During this time there would always be a special art activity or art project available as well as the usual choices of paint, crayons, scissors and (perhaps) paste, and playdough. Special science projects might be introduced as well as routine jobs for the children such as caring for pets and plants, helping to clean the classroom, or running errands. Teachers would also put out special props for the doll corner or blocks, open the water or sand play table, and provide new objects for the children to experiment with (such as large cardboard boxes). This time might also be used for playing table games, extra stories for one or more children, or special help with individual interests such as printing if there were enough teachers or volunteers for such individual work. In any case, this is a time when teachers circulate from group to group and child to child, and try *to use their time as effectively as possible to meet individual needs.*

Quiet time. The day should include one period briefer than free play when only quiet activities are available; these would include table toys, looking at books, or listening to records. Such a period encourages children who otherwise avoid small motor activities to take part in them, can provide a calming transition between active play and lunch, or makes it possible for teachers to cope with transitions such as when one group arrives and another leaves, or cleaning up after snack or lunch. Many teachers have found that a quiet period first thing in the morning or last thing in the afternoon makes it possible to spend a little time talking to each parent as children are dropped off or picked up. However, this is also a good time for working individually with children, developing a relationship, or helping with concepts and perceptual-motor skills.

Small group time. As noted in Chapter 8 (see *Concept Games, General Suggestions*), a regularly planned small group time permits the teacher to efficiently assess and give experiences in the area of concepts and language. It also provides another quiet time and a chance for teachers to develop closer relationships with individual children and to work on attention span and problem-solving techniques. While these goals are also being taught in other ways and at other times, small groups make it possible to focus especially on them. This period may be conducted by all teachers at the same time, or included in free play time with one small group being taken from the classroom at a time by the same teacher. The length of time will depend on the interest and maturity of the children and on the topics to be covered, and will vary from day to day. Early in the year small group time might be no more than five minutes; later, as long as half an hour.

Outdoor or active play. Whenever possible, children should spend some time outdoors each day. Ideally a covered area and proper clothing for each child would make this possible every day. In practice, when it is too cold or wet to go outside and there is no gym, there should be a period of active play in the classroom. This can be arranged by providing large motor equipment in one section of the room during free play or by having a special time for active games, tumbling, dancing or marching. In all-day programs it is desirable to have two active periods, either in or out.

Story and music time. To be sure that enough time is being spent on these important areas, a period should be allowed on most days for the reading of stories, listening to records, making music, or watching film strips and movies. This may be done in small groups at tables or on small rugs, or in one or two large groups depending on staff and the attention span of the children. It is probably better not to combine it with small group time since this makes far too long a period of sitting still.

Snack time. In some schools there is no set snack time, but children just go to the snack table whenever they feel like it. While this provides for individual differences in need for food, it has the disadvantage that an important opportunity for teaching and learning in a situation which is very positive for most children is lost. Snack or lunch time gives a chance for children to talk with each other and the teacher, thus giving practice in language as well as discussion of many concepts related to food. There are also opportunities to increase attention span and frustration tolerance, and to teach sharing, taking turns, and taking responsibility for the needs of others. In half-day programs there would ordinarily be a snack in midmorning. In full-day programs, especially those which do not serve breakfast, morning snack may be earlier. Afternoon snack would usually follow nap time

Other periods to be scheduled. A half-day program which includes alternate quiet and active play will probably not have a time for resting on rugs or at tables. If a child seems to have a particular problem with fatigue, brief rests in the doll corner or on a rug might be suggested at any time during the morning. In a full-day program, either a nap or a rest on cots following lunch will ordinarily be needed for all children, even five-year-olds. Adequate time will obviously need to be allowed for cleanup and for washing hands before eating. If toilet facilities are in or near the classroom, a special time for toileting will not usually be necessary. However, if children must be taken a distance to the bathroom and staff is limited, toileting may have to be done in small groups.

Just to give an idea of how these periods might be balanced one schedule of a day care center is presented below. *Another center with differing circumstances and needs would want to have quite a different schedule.* Exactly what a schedule looks like will depend on the activity cycles of the children. The teacher needs to ask such questions as: "Does the group come in slowly, sleepily, in need of quiet, or are they raring to go?" "Do at least some of the children seem to need rest periods during the class?" "Does the group as a whole tend to have long or short attention spans?"

With children in all-day care, it is particularly important to have frequent changes of activity and to be flexible enough to meet individual needs on days when the group seems to need something different.

7:30- 8:30	Arrival--teacher greets children and parents; quiet activities and a simple breakfast, if necessary, are available; TV might be a possibility.[1]
8:30- 9:45	Free play and small groups.
9:45-10:00	Cleanup, wash hands.
10:00-10:30	Snack and dress to go outside,
10:30-11:30	Outdoor play or indoor free play with large motor activities available.
11:30-11:45	Undress, wash hands.
11:45-12:15	Story, music.
12:15-12:45	Lunch.
12:45- 1:15	Prepare for nap, quiet time on cots with books and records.
1:15- 2:45	Nap time. (This is an approximate time; children get up as they wake up.) For non-sleepers, quiet play should be provided after a reasonable rest on their cots. In some cases where playground facilities are limited, non-sleepers might have their outdoor play at this time.
2:45- 3:15	Snack time (approximate; children eat in small groups as they get up).
3:15- 4:15	Outdoor play if possible .
4:15- 5:30	Free play inside, special projects and TV.

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[1] We have not taken up the question of TV in the preschool anywhere else in the book, and it seems to be one which cannot just be ignored. We feel that it probably has no place in the half-day school where time is so limited, and whose children have ample time to see TV at home. In the all-day program, especially one with limited staff, TV can serve a useful function, *if it is carefully monitored.* It should be limited to periods of time when children are likely to be tired or unmotivated for more active play, and to programs which serve a really educational function. (Footnote continued on following page.)

The schedule will also need to take into account periods when there are more or fewer staff, and periods when staff are most alert or are weary and ready to go home. Art activities, small group cognitive games, and transitions should be planned when there is the most help; outdoor free play, rest time, brief periods of listening to music, or free play with a limited set of activities can be scheduled when there are the fewest adults.

In each center there will also be relatively inflexible factors which will influence the schedule, such as the time when the playground is available or when lunch is served.

Step Three: Choose Cognitive Topics for each Week

The next step in program planning will be done each week, beginning after school has been in session for some time. The step is choosing one or more cognitive areas such as numbers or plants for emphasis each week. Usually one or two new concept areas will be chosen, and one or two will be carried over from previous weeks for review. These chosen areas provide a framework for planning and make it possible for the teacher to concentrate on a few concepts at a time rather than feeling overwhelmed by all the possible concepts she might be teaching. *However, these concept areas should never dictate the total program; and what is going on in the class can always be changed to follow the children's immediate interests or questions.* Often a concept area for the next week will be chosen becuase children have expressed an interest or because some activity of the previous week leads naturally to a new area.

The purpose of assigning certain concepts for study during the week is not to put a straight jacket on the curriculum, but to be sure that a wide range of concepts are introduced during the year and to avoid a narrow emphasis on just a few concept areas. Avoid

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[1] Cont. (Of course exceptions on timing might be made for a special program in the middle of free play time.) *The time when the TV is on should never be more than an hour a day in an eight- to ten-hour program, and children should never be expected to watch.*

relating every story, every art project, and every walk during the week to one concept. If a rough rule of thumb is needed, perhaps one third of the specially planned activities might be related to the new concept, one third to concepts covered earlier, and one third to special favorites of teachers and children, planned or spur-of-the-moment.

The introduction of the new concept for the week may be done most easily by using the appropriate concept game and by observing the children's responses in order to decide how much they know and how much interest they have in the concept. (See *Geography, Sample Concept Record.*) The teacher may also introduce the area with an activity of her own choosing, a book, or a movie and could observe and listen to the children's reactions as an informal assessment of how she should proceed in providing experiences related to the concept.

After the concepts have been decided on for the week, certain decisions must be made for each day. Ideally the concepts will be tentatively decided on for two or three weeks in advance so that teachers can be thinking about some ideas for activities, by either looking through the activity suggestions in this book or creating their own. However, changes will often be made based on children's interests.

Step Four: Plan for Special Needs and Interests.

Teachers will want to have in mind the special needs and interests which need to be taken into account in planning both for the group and for individuals. These include not only long-term needs arrived at through the diagnostic process, but also special things such as holidays, birthdays, or new interests which have arisen spontaneously during the previous week. There might also be particular problems which one child is experiencing at home or which one or more children are having in the classroom. (For the individual child this might be a problem such as a new baby or a projected stay in the hospital;

for children in the group it could be a new social grouping in which one child was being ostracized or a sudden enthusiasm for jumping from the roof of the toy shed, a forbidden activity.) In planning the week's schedule, such unexpected needs might be met by changing the concept planned for the week, for example from size to health and safety. Usually, however, the planning for such new problems or needs would be reflected in a few activities, in materials brought into the class, in choice of stories and games, or just in notes written in at the bottom of the plan sheet for reminding the teachers to handle these needs informally.

A sample plan sheet is included in this chapter. There is no reason why this particular form is better than any other, but there are some features which are worth noting. One is the space allowed for reminders about special materials needed which are not always available in the classroom, and things to be done such as borrowing projectors, arranging for busses, etc. A second reminder section covers the special needs mentioned above. Initials are used to show which teacher is to be responsible for preparing and carrying out special activities and projects. Finally, the "floater" for the day is listed; this is the person who functions during free play period as the coordinator of the classroom. (See *Floater System* for a detailed description of how this works.)

Shifting Planning Over the Course of the Year

While the basics of planning remain the same from week to week, there will be certain changes necessary depending on the length of time children have been in school and the progress of assessment. The rest of this chapter discusses planning for the individual and the group at various stages throughout the school year.

Planning for Individual Children Before School Starts

The first look at individual children and their needs comes before the beginning of school, after home visits have been made.

Week: November 12

New Concept: Animals
Follow Up: Body parts
Also work on: Numbers, colors

Exploring Table: Rubber animals, food animals eat
Bulletin board: Pictures cut out by children
Farm and jungle scenes (Cook set)

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
FREE PLAY					
Art	Cut out animal pictures from magazines (K)	Fingerpainting (D)	FIELD	Paint boxes for barns, pens, silos (K)	Tracing and coloring body shapes (M)
Other	Make carrot strips (K) New puzzles, number games out, sand table	Animal lotto out, animal tails and masks	TRIP	Make Jello (K) Peg and geo boards out	Small animal skeletons (K) Water table
Floater	Daisy	Kathy		Daisy	Kathy
SMALL GROUP TIME	Animal concept game Real Kitten (esp. food and body parts)	Talk about farm pictures (use window) and trip, animal body parts Use big doll for body parts	TO FARM	Follow-up discussion of trip (see what children want to talk about) Animal lotto	Memory game with animal cards Color counting game
Teacher	Kathy	Daisy		Kathy	Daisy
STORY MUSIC	Old McDonald Farm Noisy Book Color Kittens	Record: Muffin in the Country Sing: Ten Little Indians	(If it rains, switch schedules with Friday	Record: Train to the Country Little Blue and Little Yellow	Children's choice of books
Teacher	Daisy	Kathy		Daisy	Kathy
SNACK	Carrot strips, tomato juice, soda crackers	Pink milk, animal crackers (Birthday Ring)	Peanut Butter sandwiches, milk in cartons--straws, apple quarters, (bread for ducks)	Jello, animal crackers, apple juice	Orange juice, graham crackers
LARGE MOTOR (If inside)	Touch Your Toes game with children's choice	Obstacle course	FIELD TRIP	Tumbling mats	Looby Loo and Children's choice
REMEMBER	Bring kittens and box (K) Magazines (D,K, Parents)	Remind bus driver (K) Borrow record (K)	Extra help: Mrs. Wilson Judy McNeil	Borrow mats (D)	Bring skeletons from high school Science Room (K)
SPECIAL NEEDS	Yukiko cannot go out until Dr. O.K.s	Jose Birthday	Ask Judy to watch Cynthianne especially. Anne may be afraid of cows.	Kirsten-tonsils out, send card from children	

In looking over the record of the interview with the mother and comparing their impressions of the child, the teachers try to decide which children should enter together (assuming they have been able to manage staggered entrances) and which children may need special help. Plans will be made for the child who does not speak English, the handicapped child, and the child with allergies. Mothers should be alerted to the possibility that they will need to stay for a few days or to come early if the child has trouble adjusting. In the case of mothers who cannot do this because of jobs, younger children at home, or illness, plans will need to be made for action in case the child becomes very upset at being left alone.

Planning for the Group Before School Starts

In preparing for the first week of school, the teachers should have first of all spent some time in getting to know each other if this is the first year in which they have worked together. (See *Staff, Relationships* for a discussion of this process.) They will also have come to some general conclusions about tentative goals for the group, limits and how they will be enforced, emergency measures, and procedures for program planning.

In planning for the first few weeks of school, the teachers will try to be sure that everything is as well organized as possible. Before the beginning of school, supplies should be on hand, shelves organized, and lockers labeled. Sometimes it is possible to involve parents, volunteers, and even the children in helping out during this period, thus developing relationships before school starts. This might be particularly helpful in a new school where there is a tremendous amount of work to be done.

Planning for the Individual Child Early in the Year

During the first few weeks of school, daily communication between teachers is essential, even if it means planning to stay 15 minutes after everyone has left or talking on the phone after dinner.

Problems with the program or difficulties with adjustment of individual children must be discussed as soon as they are observed if the program is to run smoothly. For example, the teachers may decide that the group is not yet ready to be taken safely on the walk which they had planned for the next day, that one teacher should call Shari's mother to discuss her refusal to use the toilet at school, or revise the plans for handling story time so that one teacher will be free to take Billy into the next room if he again becomes disruptive.

In the weekly planning session, the teachers will need to spend about half the time to review quickly the adjustment of each child in the group, stopping to plan for those who are having real problems adjusting, whether it is Karen who still spends all of her time in the doll corner sucking her thumb or Peter who has not yet settled down for more than five minutes at a time.

During this period teachers will, of course, begin to be aware of less immediate needs such as one child's lack of coordination or another's unclear speech; and these should be noted on the anecdotal record. But the emphasis during these first few weeks must be on helping children and teachers to feel comfortable and secure in the group, not on detailed assessment.

Planning for the Group Early in the Year

During the first few weeks of school, attractive activities which require little preparation or cleanup should be planned so that the teachers' total attention can be on the children. There may be more than the usual amount of outdoor play time; and indoor activities might include playdough, coloring, bead stringing, and simple puzzles as well as the usual free play choices of doll play, blocks, and books. It may be well to include small group time as part of the routine from the beginning, but it should be very brief and present very attractive activities. It will include things that the children can see and touch as well as talk about, such as a baby animal or the game in which children feel inside a paper bag to guess what it contains. At story time the books should be time-tested favorites, at quite a simple level, such as *Caps for Sale* or *The Noisy Books*. Thus the emphasis during this period is on children and teachers getting to know each other, and developing an easy acceptance of routines. Extra adult help is tremendously useful during this period, *if* the extra people understand and accept the school's goals and limits so that the children experience consistent handling as they learn what school is all about.

Planning for the Individual During the Diagnostic Process

During this period the teachers will continue to focus on the children who seem to have the most immediate needs in their weekly meetings, but they will draw on what they are learning through the testing as well as on their general impressions. For example, after finishing the motor testing, the teacher who has been doing it might say, "I think we need to begin working on Jose's large motor coordination right away. He has a lot of trouble with balance and is very awkward." Or after doing the Language Checklist, a teacher might note, "Linda can talk in sentences, but she seems scared to open her mouth around the other kids. What could we do to help her?"

The Individual Planning Session

When motor, language, and social-emotional testing and the individual testing session are completed, it will be necessary for the staff to set up extra meeting times to go over each child's needs in detail and to plan for him. There are many ways to handle this process, but some effort must be made to do it efficiently. When teachers are interested in each child, it is possible to spend a whole two-hour session on just one child; and few teachers have this much time. Of course there will be an occasional child whose needs are such that at least an hour's discussion, possibly with an outside consultant, will be necessary; but it should be possible to discuss most children in 15 to 20 minutes.

One way is to schedule three or four sessions at which each staff member can present one or two children, describing their needs as she sees them and tentative plans for the child. (It usually works out fairly well for one staff member to do motor and individual testing sessions on all children and then to turn those records over to the teacher responsible for that child. Then each staff member does the Language and Social-Emotional Checklists for the children assigned to her for assessment.) Following the presentation, the other staff comment on, add to, or perhaps in some cases disagree with the needs and plans. The final summary for the child's files will be done by the teacher responsible for that child, but it will hopefully represent the thinking and agreement of all staff members.

For efficiency, the presenting teacher usually discusses only those areas where the child needs help or has special strength and interests; but the other staff participating should have a list of all areas in front of them to be sure that they agree that the child is functioning adequately in the areas which are not discussed. The group should never try to discuss too many children at one sitting, usually no more than four or five per session and should avoid more than one or two children whose needs are likely to require lengthy discussion.[2]

If there is only one experienced teacher working with the children, she may want to be responsible for doing all of the diagnostic materials and the presentations herself; but *it is very important that anyone else who works with the children should be actively involved in the discussion and planning for the child. It is always much harder for anyone to make use of knowledge about a child if she has not been a part of putting that knowledge together.*

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[2] This discussion supposes a typical nursery school group of 15 to 20 children with two or three staff, with possible involvement of the director, nurse, and/or volunteers. There is a discussion of the use of the Diagnostic Approach in kindergarten or day care centers where staff is more limited at the end of this chapter.

The actual planning process is usually not difficult or lengthy. The process goes something like this:

1. State briefly and clearly what the child needs to learn.
2. Look at what the child brings to the learning situation--the things he can do well, the activities he enjoys, the people he likes, and the things which seem to motivate him.
3. Make concrete plans using the child's strengths to help him learn in those areas where he needs help.

See *Needs and Plans Sheets, Sample* for a hypothetical record of this process.

Planning for the Group During the Diagnostic Process

Program planning for the total group during this time is usually more detailed than during the first period. Teachers know children better; the children have more or less adjusted to the routines; and it will probably be possible to plan for more complicated activities such as finger painting or group games, or for activities requiring children to be more responsible such as having visitors in the room, walks , and field trips. Teachers have also gotten to know each other better and are better able to take into account individual strengths and preferences in deciding who is to do what.

During the diagnostic process teachers may want to lengthen the small group time and to introduce a concept area each week. However, with a group of children who have many social-emotional problems or with limited staff time and resources, teachers should be careful not to take on more than they or the group can handle.

Even when the results of the diagnostic tasks are not yet complete, the teachers will also be beginning to get a feel for the kind of group they have and may change the daily schedule to take into account the needs of the group as they see them at that point. For example, a large group of active boys may dictate a change in outdoor play times; and many children with language problems require more time and activities given over to language development.

Planning for the Individual and the Group During the Remainder of the Year

Once the diagnostic procedure has been completed, the needs of each child should be taken into account in each week's planning. One way to do this easily is to have a summary sheet which can be referred to as the planning for the week is carried out. While this sheet would not be posted in the room, it should always be readily available so that a teacher seeking to direct a child at loose ends or deciding which children to seek out for a particular activity can check quickly on each child's needs. In practice, after a few weeks most teachers will have the children's individual needs fairly well in mind and will not need to check very often. The sample form which has been included in this chapter is organized by individual children, with the needs of each child listed. Another possibility might be to list each area, with the names of children needing help under each. One might try both and see which seems most helpful. Note that this can be in very rough form with items being added or crossed out as appropriate.

A quick check of the finished program for the week against the needs sheet will usually be enough to insure that activities are available which are suitable for helping all of the children in areas where they need to learn. (Keep in mind new or special needs discussed under *Program Planning for Special Needs and Interests*.) Sometimes a certain number of children can be assigned to each staff member so that this kind of quick check on individual needs can be most efficiently done. *However, it is very important that this kind of division of responsibility for a small group of children should not extend to the classroom. Each staff member should be equally aware of and equally ready to help with the needs of any child (within the organization of the classroom at that particular time), not just concerned with "her children."*

NEEDS OF INDIVIDUAL CHILDREN--FEBRUARY

Anne	Initiation of activities (help with making individual choise), curiosity. Concepts: advanced preposition and time.
Betsy	Attention span, frustration tolerance, rights of others.
Cynthianne	Large motor (but don't push), frustration tolerance, relation with teacher, acceptance of limits, self concept, interaction with other children. Concepts: ? (see individual record).
Golda	Small motor (peg boards, puzzles, coloring), vocabulary and language production, curiosity, frustration tolerance, self-concept. Concepts: advanced numbers, colors, body parts, prepositions.
Kirsten	Perceptual motor (joint activities with Golda ?), curiosity, interaction with other children), self-concept. Concepts: advanced time.
Margot	Rights of others, taking turns. Concepts: safety, advanced prepositions, time.
Maria	Large and small motor, vocabulary and language production. Concepts: memory, advanced color, body parts, prepositions
Yukiko	Vocabulary and language production, advanced concepts in all areas (mostly vocabulary)
Johnny	Attention span, frustration tolerance, acceptance of limits. Concepts: memory, advanced body parts, time, safety.

Jose	Motor skills (running, climbing, woodworking, 3-D sculpture). Concepts: memory, advanced plants, color, body parts, prepositions.
Martin	Try to develop interest in small motor and art activities. Concepts: plants, prepositions.
Patrick	Perceptual motor, attention span, rights of others. Concepts: advanced color, body parts.
Paul	Large motor, small motor, language production, attention span Concepts: plants, time, color, prepositions.
Timothy	Relationship with teacher (??), rights of others. Concepts: Advanced prepositions, time.
Warren	Attention span, acceptance of limits, rights of others. Concepts: advanced plants, prepositions, time.

Once diagnosis is complete, there will be frequent discussions during weekly planning sessions of those children with the most serious needs; but there should be a chance to look quickly at each child again after midyear to be sure that no new needs have developed or to find the child who needs more advanced or stimulating activities. Usually such a recheck will not require new forms but just going back over the original Needs and Plans Sheets, spending a little time observing the child in the classroom and making notes on his progress.

Finally, at the end of the year the teachers will want to do some kind of informal summing up for parents and for the child's next teacher. With the parents, this will probably take the form of a conference in which parent and teacher together discuss progress during the past year and goals for the coming year. There will probably be some discussion of ways in which the child can make productive use of his summer.

The record for next year's teacher must be carefully thought out to give her all the information which might help the child adjust to the new school setting, and to avoid writing down anything which might prejudice the new teacher or any successive teachers against the child. One suggested form filled out for our hypothetical child, Cynthianne, is included in this chapter. Looking back at the Needs and Plans Sheets for this child in Chapter 3, it can be seen that the teacher has tried to stress the positive, but at the same time has tried to make realistic and useful suggestions.

Program planning for the remainder of the year follows essentially the outline described above. It is important to keep a creative and fresh approach to activities and to avoid a feeling of routine. In some ways the addition of a fresh concept each week does this, but teachers should also sense when the group would benefit from something new and different added to the program.

Many children, especially from deprived backgrounds, may be overwhelmed at first by too many things to do--by overstimulation.

KINDERGARTEN REPORT - SAN JUAN COMMUNITY NURSERY

Name: Cynthianne
Age (as of Sept. 1): 5 yrs 9 mos

To: Pine Valley Kindergarten
Teacher(s) Mrs. LaCord
Miss Xavier

Motor Development (Large, Small, Perceptual Motor): Well coordinated, especially in work with her hands. Enjoys all kinds of artwork puzzles, lotto games, etc., and is good at them. Does not like outdoor activities so much and is just getting over a fear of heights. She needs help to feel a little freer in her motor expression, but generally very adequate.

Language Development: Speaks clearly and distinctly and has a good vocabulary. Very interested in books and might be ready for considerable reading readiness work fairly soon.

Social-Emotional Development (Relationships with adults and children. Initiation and follow-through of activities. Curiosity, acceptance of routines and limits, frustration tolerance. Feelings about self): Cynthianne has come a long way this year in getting along with people. With adults she does best if allowed to make her own approach slowly. She relates well to girls especially quiet ones and hopefully could be helped to make new friends by involving her together with a few other girls in art activities or doll play. She initiates and follows through well on things she is interested in. Sometimes has trouble with limits and routines but does fairly well if warned ahead of time and made to feel responsible. Now feels much more positive about herself, but is going to need a lot of success experiences and people who like her to continue to improve her feelings about herself.

General Concept Development: Has learned a great deal in the past few months--is familiar with most basic concepts taught in nursery school, but could use special help with time and measurement concepts.

Contacts with Family: Mother is very fond of Cynthianne and anxious to help her learn. Reads to her every night. She was not often able to come to school, but was friendly and appreciative of our concern for C.

Special Interests, Strengths and Needs: C. loves art work, cooking activities, books, and doll play. She is good at anything involving her hands. If made to feel responsible she can be very helpful--likes to "read" to other children. She needs a lot of praise and love when she asks for it. Especially likes to have stories told about her pictures and things that she has done.

For this reason, it is best not to put out too many activities at the beginning of school, but rather to add new ones gradually as children seem to need new things. The opposite of this is the boredom and consequent "wild" behavior which seems to overtake children at a certain point in the year when they have thoroughly explored all the activities or when they are not being challenged by the play materials. If a teacher anticipates this by adding to or changing materials frequently--such as new props for doll play, different colored paper on the easel, more difficult puzzles, or more complicated stories--she may be able to avoid such a point of decreasing productivity.

Teachers also may feel a need for change just for the sake of their own mental health--changing the schedule, changing the room arrangement, or even exchanging a few children or a staff member temporarily with another room. (Teachers will, of course, keep in mind the needs of children who are made insecure by sudden change.)

Program Planning in Groups with Too Many Children and Too Little Staff

Suggestions for assessment of children in such groups have been given in Chapter 3, and some ideas for more efficient use of staff appear in Chapter 9. (See *Assessment in Large Groups* and *Staff, Effective Use Of.*) The process of planning for the individual and the group, however, is in many ways very similar no matter how many children or staff a school has.

First of all, it is still necessary to have *time* for planning. A teacher who expects to be able to improvise all her activities on the spot and to deal with each need as it arises without any thought before or afterwards will find herself essentially running a baby-sitting operation, unless she is a person with remarkable teaching skills and many years of experience to draw on. If a teacher works alone, time for planning may be taken while in the dentist's office, during commercials on the late-night movie, at stoplights, or in other minutes snatched in a crowded schedule; and it may be done on the back of an envelope. But it *must* be done, and it *must* include planning for individuals as well as for the group. If there is a teaching team in the classroom, at least some of these snatched moments must be taken together. Communication between staff about the needs and progress of the class and of each child must be frequent and consistent. (Remember that it is a responsibility of every teacher to try to convince administrators that time for planning is a part of the teacher's job.)

It still works best in a large group to plan a schedule with different things emphasized at different times to be sure that there is the opportunity for each child to have a broad range of experiences each day to meet his various needs. In a large group with few staff the schedule will vary primarily in the amount of responsibility for routines which must be placed on the children and in the restrictions that too little staff may place on certain kinds of activities such as finger painting or woodworking which require a teacher present at all times.

Emphasis on certain concepts for a period of time still makes sense for a large group, although the teacher will be more likely to use informal diagnostic approaches to find out how much the children know, rather than trying to play the concept games. Exactly the same kinds of teaching techniques may be used to teach concepts, so long as activities requiring too much teacher time are avoided. (Keep in mind the possibility of recruiting volunteers or helping children develop self-help skills and responsibility to make some of these attractive but time-consuming kinds of activity possible.)

Summary. By now the message of this chapter should be clear: time and organization given to planning, for both the group and the individual, pay off many times over in a better educational experience for children and in satisfaction and greater peace of mind for the teacher.

Chapter 10

On Being an Effective Teacher (Space, Equipment, In-service Training, Staff and Parent Relationships)

When the first edition of this book was written, we thought of our audience as being mostly experienced teachers in already existing nursery schools, day care centers, or kindergartens. However, we have found that many of our readers are people just going into work with children, who are asking us about such problems as setting up classrooms, making schedules, and working with parents. In this chapter, which is new in this edition, we have tried to give some ideas about things which might be useful to know even though not directly a part of the Diagnostic Approach. (Although if a diagnostic approach is defined as one in which the teacher outlines needs and then finds the most efficient way of meeting them, such an approach is just as important in looking at space or staff as it is in looking at children.)

Very few people who have not actually taught young children realize what a very difficult job it is. Even those who recognize its importance and would never label it "just baby-sitting," do not understand the level of concentrated energy and thought necessary to be responsible for the safety, happiness, and learning of 15-25 children--not just for a brief period of time, but hour after hour. Especially in an all-day setting, or in a two-session kindergarten, consistently meeting the needs of all of the children sometimes seems to require superhuman abilities and energy.

However, certain very practical things *do* make a difference in how well a teacher can use the know-how that she has for teaching and working with children. The most energetic, creative, and self-disciplined teacher can go with the Peace Corps into a poverty-stricken village and--using sticks, stones, and dirt--run a class which meets the needs of the children. But most of us are not of such heroic stature. We *can* do a good job with children under difficult circumstances; but every practical problem which we must cope with on a daily basis takes time and energy away from our teaching of the children. To try to be of some help with these practical problems we discuss in this chapter some of the ways to use space, equipment, staff, and parents most effectively.

SPACE

Making the most effective use of space. Everyone knows that most care for young children is housed in less than ideal places. This is because few nurseries or centers can afford to build new buildings and must get along in makeshift quarters--church basements, school gymnasiums, converted grocery stores, etc. Kindergartens are sometimes better off in rooms designed for the purpose, but even these often do not meet the needs of a modern kindergarten program. Even day care centers in new architect-designed buildings are not always so well off. Because new construction is so expensive, actual square footage is often at an absolute minimum. In addition, a surprising number of new buildings for children are designed without help from people who actually work with young children. However, in order to plan how to use most effectively the space that one has, it helps to have in mind what an ideal space might be.

Characteristics of an Ideal Space

Size

Most licensing regulations ask for 35 square feet of indoor space per child, not including bathrooms, halls, kitchens, and offices. This would mean a room 24 feet by 24 feet for a group of 16 nursery school children or a room about 30 feet by 30 feet for a group of 25 kindergarteners. We think it's better to have more space than this, especially for the nursery school children. If there is only one room in which the children must spend all their time while indoors 50 square feet per child (a room 30 feet by 30 feet for 16 children) would be better.[1] If there is daily use of other space such as a gym or additional small rooms for special projects such as small group meetings, art or music, 35 square feet per child in the main classroom might be enough.

Another thing which obviously will affect the "ideal" size of the classroom is the amount of outdoor space. The same codes which require 35 square feet of indoor space often require 200 square feet of outdoor space for each child. This means that, for a school with 45 children, there should be a play yard about 100 feet on each side.[1] This would be a very good size for play space for this many children since they would not ordinarily all be outside at one time; but most schools, especially in cities, have much less space than this. In many cases a nearby park or a small space on the roof must serve for active play. Whenever the amount of outdoor space is inadequate or in climates where there is much rain or bitter cold, it becomes much more important to have extra indoor space so that there will be room for running and ball play, climbing equipment, sand tables, etc. On the other hand, if one is lucky enough to live where there is a climate like that of southern California or to have a covered outdoor play area, space inside can be more limited because many of the usual indoor activities can be carried on outside.

One might think that there would be no top limit to the amount of space which would be good to have for a classroom or playground for young children. This does not turn out to be true, however.

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[1] Of course spaces can have different proportions; we have listed the dimensions of square rooms and playgrounds to make it easier to visualize. Actually, oblong spaces make arranging furniture and equipment easier.

In the unusual situation where a group of 15 children is housed in a very large space such as a gymnasium, especially one which also has a very high ceiling, or when the outside play area is almost "the whole outdoors," the teachers find it very hard to keep track of where everyone is and end up spending a lot of time just hunting for missing children. More than this, the children often seem to feel lost and at loose ends. A lot more time is often spent in wandering than in productive play, and small group activities seem to suffer. In many cases there is a lot of aimless running and yelling.

Atmosphere

Just as important as the amount of space is the psychological impression which one gains from a classroom, but the latter is much more difficult to define. However, if one tries to analyze the difference between a cheerful and stimulating room and one which is dreary and depressing, one often finds some of the following kinds of contrasts:

1. A room with light colored walls and a variety of bright colored accents versus dark or dirty walls and few bright colors.
2. Interesting play materials displayed in such a way as to be easily seen and used versus a clutter piled onto shelves and into boxes.
3. Adequate but controlled lighting versus harsh, overly bright lights or dim, poorly directed lighting.
4. Child-height windows versus high windows or none at all.
5. Controlled noise versus loud, reverberating noise.

Fortunately something can be done about most of these problems; some suggestions will be made below.

Water and Toilets

Probably *the most important single thing* a teacher or administrator might ask in looking at a possible nursery school or day care room is, "Where is the bathroom?" It is *very* desirable to have toilets just off the classroom (that is, where children can go by themselves without going out into a hallway or into another part of the building) and a sink actually in the classroom for handwashing, drinks of water, and cleaning up. These make it unnecessary for teachers to take time to accompany children to the bathroom, avoids the problem of "losing" children who go out to the toilet or for water, and makes cleanup and provision of activities which need water much easier. Having a toilet nearby is not quite so essential for kindergarteners who are more independent; but it is very helpful, especially if the corridors are full of rushing, noisy, older children who may be frightening to the little ones.

Licensing regulations call for two toilets and two sinks to 15 children, but if one toilet is just off the classroom, the second may be elsewhere in the building and used only for emergencies. If toilets and sinks are high, a platform in front of them is safer than stepstools which may tip. A large sink with several mixing faucets can be used for both handwashing and water play if it is in the classroom itself. In or out of the classroom, it is better to have a standard kitchen sink with space to get a small bucket under the faucet rather than a standard bathroom sink.

Storage

Everyone agrees that adequate storage is extremely important for running any organization, whether it be an office, home, or school; yet no one ever seems to have enough. In planning a new school or rennovating an existing one it is important to have three kinds of storage. First, there should be some locations in the classroom for things used every day or almost every day. Second, *lots* of space outside the classroom is needed for extra supplies, seasonal items, and essential junk, such as toys waiting to be mended, egg cartons, wood scraps, cardboard boxes, etc. Third, large indoor equipment such as mats and climbing equipment needs space near the classroom while movable outdoor equipment requires either storage in the yard or inside, but readily reached from the yard. Storing outdoor equipment in the classroom as is done in many places means that it must either be put outside rain or shine, or take up valuable play space inside on rainy days.

Working with the Problem Space

Size

If the classroom space is too small, what can be done? To reduce the feeling of being cramped and under pressure, one can make the room feel bigger by painting the walls white or a very light color. Full advantage can be taken of the window areas by putting curtains, if any, at the sides rather than over any portion of the window. There should be a minimum of furniture, and all furniture should be lightweight and painted a light color. Having only a minimum of lightweight furniture makes the room seem larger and also gives more freedom of movement. If there are stacking tables, stacking or folding chairs, room dividers which roll easily on casters, space which is used at one time for table activities can be quickly shifted to large motor play. Folding junglegyms are available, and walking boards and mats can be hung on hooks on the wall. Children enjoy being involved in the process of moving furniture if it is light enough for them to handle.

When space is at a minimum, every item in the classroom should be considered in terms of its value to the program and the amount of floor space it occupies. Cubbies are nice, but hooks on the wall and a bench to sit on while putting on boots take up less room.

Maybe hooks and a bench would fit into a hallway, taking the coats out of the classroom altogether. If there is a piano but a non-musical teacher, could there be a better use for the space? Could easels be mounted on walls instead of free-standing?

One imaginative solution to a small classroom is the two-level space. Building it requires only imagination, a good carpenter, and a reasonably high ceiling. Given a space a little over twice as high as the children are tall, a platform can be built as a climbing and sliding platform, just a place to look down from and feel tall, or a place for looking out of high windows. Below could be the doll play house, the reading corner or even a long narrow desk with benches where children can bring books to read, coloring projects, or where table toys could be stored and used.

In trying to cut down on the problems caused by the too large space, one could paint walls and ceiling dark or very bright colors to make the space seem smaller; but this would have the disadvantage of making even a large space seem dark and oppressive. An alternative method of reducing the psychological size of the space is to subdivide it into smaller, more livable spaces. In a large gym or basement for example, one might simply designate a part of the area as "outdoors" and divide it off from the rest of the area by a wall. This wall could be fairly high, if the "indoor area" has its own light, four feet or so if light must come over the wall. One effective way to do this is to use cubbies with their storage side to the larger space, their backs to the indoor space. A door or gate which can be closed makes the separation more effective.

If the too large space is not quite big enough to warrant treating it as two completely separate spaces, the principle of dividing it into psychologically separate spaces till holds. To divide the doll corner, the reading area, or the table toy area from the more active play spaces, use dividers that are high enough so children can't see over, low enough so an adult can. Define different spaces by rugs. Children love separate little "houses"; even huge packing boxes can be used temporarily and can be thrown out when they begin to fall apart. Avoid running and chasing play by arranging play areas so that possible running paths are broken up by furniture and by closing off extra doors between rooms which tempt children to run in one door and out another.

A two-story play area can be just as effective in making good use of a large space as in a small classroom; but it can be larger, taller, and even located in the center of the room. In a really large space an exciting three-level play structure with all kinds of slides, climbing equipment, and hideaway cubbies might be constructed if an imaginative designer and the money could be found.

Hanging small brightly colored lightweight panels, mobiles, Japanese colored paper balls, etc., just above adult head height can make high ceilings seem lower. These can be easily changed if permanent hooks are put in the ceiling and lightweight ropes or heavy string is left hanging from the hooks. (Of course any temporary walls or ceilings must be constructed of fireproof materials, though an occasional Japanese lantern or tissue paper mobile should be safe enough.)

Providing a Cheerful Atmosphere

Taking the points mentioned earlier one at a time, there are some obvious ways to improve a dreary room. As mentioned under the problem of space, light (not bright) colored walls are best for any space for young children, preferably a warm rather than a cool tone. Bright accents in a variety of shades and hues should be introduced in curtains, pillows, burlap wall hangings, the insides of shelves, and, of course, in children's artwork.

While we have talked about the importance of storage for efficiency, it is also important for atmosphere. Shelf space arranged so that children can put larger items away neatly, and plenty of cardboard or plastic boxes for storage of smaller items (such boxes can also be brightly painted or covered with contact paper) can change the whole look of a room.

Lighting problems may require consultation with an expert or some trail-and-error experimenting, but solutions need not be expensive. In the case of harsh, overly bright lights (usually florescents) replacing bulbs as they burn out with bulbs of lower intensity and warmer color helps, as do egg crates or other diffusers. In the case of too dim lights (usually incandescent) getting the fixtures washed and increasing the wattage of bulbs often solves the problem. However, in a room with little or no daylight from windows, lighting from ceiling fixtures often needs to be supplemented with some kind of wall fixtures which direct light upwards, thus giving a much more pleasant mixture of light. Such lights can be very inexpensive brackets or even photo reflectors with ordinary bulbs. Floor or table lamps would serve the same purpose, but are obviously not safe in a classroom.

Most licensing regulations forbid placing classrooms in basements, so that in theory each classroom should have some windows. In practice many schools can be found without windows and require extra effort to make the classroom pleasant. The points made earlier about light colors, bright accents, and adequate lighting are especially important here. In addition one should provide psychological substitutes for windows: large, bright posters which are changed frequently; lots of artwork on the walls, as many plants as possible (be sure they are not poisonous); and perhaps a lighted fish tank. Where there are windows above children's eye level, efforts should be made to make it possible for children to see out safely.

All of the suggestions above can be followed at relatively little cost but make a tremendous difference in the educational environment and teacher morale. Noise control can be a much more expensive item, but is an essential one. Programs for young children are (and should be) relatively noisy. In rooms with highly reflective ceiling, walls, and floors, the noise level can become almost unbearable. In such a room the installation of acoustic ceilings, carpeting of floors in noisy areas such as the block corner, and cork or wall hangings on some walls should have very high priority.

Bathroom Location

If the bathroom is some distance from the room, problems can be reduced in two ways. First, provide some water in the classroom. Children enjoy the responsibility of helping to bring a gallon thermos of water for drinking and a pail of soapy water for cleaning up after art projects into the classroom each morning by wagon, and later helping to empty the pail. Second, routines are planned to reduce the number of trips. Parents are asked to be sure children go to the toilet before leaving home. Messy activities are scheduled just before snack or lunch to avoid having to wash hands twice. Take children to the toilet at the same time, but take them back to the bathroom before nap only if their hands are very dirty; or take some back to the bathroom if they need more frequent toileting than the others in the group.

Providing More Storage

In the classroom low storage for children is best provided by shelves on rollers which can be moved for cleaning or to provide more clear floor area, and which also serve as area dividers. Storage of teachers' supplies can consist of high cupboards with doors which do not use up floor space. With a limited budget secondhand bookshelves and used kitchen cabinets can often be purchased. With a limited budget *and* limited space a storage wall may be used consisting of standards screwed to the wall and boards on brackets, with the low shelves for the children and higher shelves for adults. Children can comfortably use shelves much higher than the storage usually provided for them, if it is necessary.

However storage shelves are made, be sure that they are safe. The traditional economy book shelves of boards and bricks will not work because such an arrangement requires the weight of heavy books to be stable.

Storage outside the classroom is usually provided in a closet, though locked cupboards along a hallway can be built if necessary. The biggest problem is often getting administrators to understand how much storage a nursery school or kindergarten requires. For large outdoor equipment it is worthwhile to consider purchasing a prefabricated shed.

Solving Very Specific Problems

Sometimes an otherwise satisfactory room will present one major problem which must be thought through. Here is an example from an actual school:

Stating the problem. The room is on the second floor, and windows are above children's eye level. The children keep climbing up on the window sills to look out. There is a playground below where their brothers and sisters often play. The teacher has not permitted this climbing because of the danger of falling through the glass, but it has become a source of continuing conflict. The room is quite large. In thinking about the problem, the teachers concluded that the children's desire to see out is a perfectly normal one and that it would be impossible to stop the climbing without either blocking access to the windows completely or being very punitive in dealing with the children. How can they be allowed to see out without danger to themselves or disruption to the program?

Solution. The simplest solution would be building a platform along the wall under the windows, for either a portion or all of the distance so that children could go and look out whenever they liked. With some groups, only reminders might then be required to prevent climbing further. If necessary, the lower parts of the window could be screened off with wide mesh wire to make it possible to see out but not to climb higher. If money is available, the platform could be made with seats, pillows, and storage for books so that it becomes more than just a looking-out place.

A summary of principles for using space effectively. The problems faced by each teacher in making the best use of available space will be different; however, there are some goals and principles which will be the same for everyone.

Within the classroom, provide enclosed, secure spaces where children can work or read without interruption from more active play. Have both child- and teacher-level storage in this area, with child-level storage carefully arranged so that children can easily see what is available and return materials to shelves. If possible, have a special and very attractive reading area with display for books.

Unless outdoor space is available every day because of the climate or because of having a covered area, provide space inside which can be used for large truck and car play, active running, tumbling, or games for at least part of the day. Storage for active play equipment such as folding junglegyms, mats, and wheel toys should be nearby. Arrange spaces to discourage running through other areas.

Clearly define housekeeping and block areas as separate from either table play or active play. If possible, carpet block areas to decrease noise level.

Place art areas near some source of water, and have an easily washable floor surface. There should be enough storage within the space for art supplies used daily, both at child- and teacher-level.

The bulletin board and exploring table should be placed where children are likely to spend time looking and exploring. They should be visible, but not in a traffic area.

If at all possible have outdoor clothing areas near the entrance to the room and near the exit to the outdoors (if they are not the same). Avoid having cubbies open into the active play area because of the confusion when children who are arriving or leaving conflict with children who are playing. Instead, if possible, use cubbies to make a "locker room" within the room with backs used for display and storage. However, it is good if some relationship to the playroom can be maintained since many children find their cubbies a safe place to retreat to in times of stress.

In trying to plan a new classroom or to rearrange an old one, it often helps to draw a plan of the classroom on squared paper with cutouts representing furniture and major equipment and to shift items around on the paper, and in the meantime trying to think about how each tentative arrangement might work in reality. This allows for efficient consideration of traffic patterns, access to storage, and relationships between areas. The same kind of exercise may be used in planning a new playground, keeping in mind the possibilities of discarding excess items and building or buying new ones which are really needed.

EQUIPMENT AND SUPPLIES

To the typical teacher on a budget, looking through a catalogue of educational equipment and supplies is like a small child with a Christmas toy catalogue--it can truthfully be called "a wish book." Never before have so many beautifully constructed and really educational toys been available, and never before at such high prices. (There is, of course, a great deal of junk being sold, too.)

The problem is how to choose wisely and make the available money go as far as possible. Most teachers come into a classroom where there is at least some equipment. But the decision process outlined below can be used whether the teacher is given the job of completely furnishing a new school or has only a small amount each year to supplement existing equipment and supplies.

Cataloging What Is Available

Before deciding what new equipment to obtain, the teacher will need to catalogue the facilities already available in her classroom. Even in a new school there will be things to consider, for example, the amount and availability of outdoor play space and existing outdoor equipment will affect large equipment purchases. Whether there is space for hanging coats outside the classroom will determine whether lockers are purchased; if kitchen facilities will not be available for cooking projects, cooking equipment will be needed in the room; and if the bathroom sinks cannot be used for water play, water for play (and perhaps for cleanup too) may need to made available in the classroom.

Available toys and equipment should also be catalogued, with notes made as to their condition (such as missing puzzle pieces and tricycles which need mending). It will make the next step more efficient if toys for different purposes (such as table toys, large motor equipment, etc.) are listed on separate pages.

Determining Priorities

Looking at each type of equipment, the teacher next lists needs for the classroom, as much as possible in order of priority. By looking at each type separately it is easier to balance out needs so that, for example, there will not be more table toys than the group could possibly use and a poorly equipped doll corner. These needs will have to be based on the teacher's general experience with this age level since she will not yet know the needs of her new group. Equipment priorities will also be based on the physical plant, as noted before, and the kinds of play which the teacher herself values.

While it is obvious that a Montessori school will have a very different priority list from a preschool stressing music and dance, there will be many more less obvious values which enter in. For example, one teacher may prefer to use mostly junk materials for science but build up a large library of hardcover books while another may feel the need for balances, magnets and cages for animals while using paperbacks and loans from the library. Both can provide good science *and* book experiences in their own ways.

The tentative list of supplies given in the Appendix is only intended to be a beginning from which a relatively inexperienced teacher might want to start. It should never be used as a model.

Budgeting Available Funds

In most cases the next step in purchasing equipment will be to look at the money available and decide how it is to be spent. Usually this will involve working down the priority list in each area and starting with the most needed equipment or supplies and moving down. However, as noted above, sometimes one area will be fairly well equipped already and almost no money may be spent there in a particular year. Relative cost must also be taken into account. Thus a piano might be the high priority item on the music list, yet so expensive that very little else could be purchased in any other area that year if the piano were bought.

Unless the school is new and operating on a really low budget, it is also good to save out some money to be spent during the year rather than before school starts. This is because groups will have needs different from those which the teacher anticipated, and it is important to be able to meet them as they arise. One may want to buy two tricycles in March if a tremendous enthusiasm for tricycle riding overtakes the group (or if the old ones do not last through the year as expected). Or the teachers may find this to be a group which seems to gain a great deal from field trips and want to divert some of the equipment money into paying for busses. (There is rarely any leeway in any item other than equipment and supplies.)

It is particularly important to allow enough money to replace paper, paint, and other consumable supplies in case the amount ordered does not last through the spring. While both teachers and children need to use care and common sense in the daily use of expensive supplies, it is very unfortunate when the art program must be cut off early because there is not money to buy paint (or when the teacher ends up paying for it from her own pocket). Further, as we mention elsewhere, even the most creative teacher with the best equipped classroom usually finds times when the children seem to need something new to spark new interest and directions in play. If there isn't any money, this may be junk materials; but it is nice to be able to buy something new when it seems just the thing the group needs.

This brings up a problem which many public school teachers have, whether prekindergarten or kindergarten. They are expected to order all their supplies the previous spring and are often given no petty cash at all to buy such items as pumpkins, feed for the gerbil, shiny paper for a special project, or any of the dozens of special needs which arise when a creative program for young children is going on. Teachers should pressure administrators to provide some way of meeting these needs other than requiring teachers to pay for them. (This is a little like the need to convince parents that new toys should appear when the child is ready for them and not just on Christmas or birthdays.) If this is unsuccessful, parent groups are sometimes willing to have a bake sale or white elephant sale to raise money for a petty cash fund.

Perhaps one point should be made particularly to those helping administrators set up new programs. In the recent era of alternate feast and famine in funding of preschool programs, sometimes people with relatively little knowledge of preschool education had a great deal of money to spend in a hurry, and spent unbelievable amounts on renovation and equipment, ending with a poor setting for learning because not enough thought went into the process. Here the teacher's job is to try to put the brakes on, to see if some of the money couldn't be diverted to some other need such as extra staff, consulting services, or whatever is lacking in the overall budget. When a large amount *must* be spent for equipment and supplies and must be spent *now*, the wise teacher will stockpile materials and short-lived equipment such as paint, paper, books, records, puzzles, and table toys to prepare for the inevitable famine.

Exploring Alternative Sources of Materials

Before making final decisions on what to order, teachers also need to look at alternative ways of meeting needs. Money can be stretched in many ways. Saving money is essential on a tight budget, even a school on a reasonable budget can always find good things to do with money saved. Look at each item on the list of needs and ask:

How difficult would it be to make this? Throughout the activity section we have commented on the relative ease or difficulty of improvising particular kinds of apparatus. In each case, one is weighing the amount of money one has against the amount of time (teacher or volunteer) that one has. For example, it would be almost wasteful to buy sound cans or bean-bags which are made so easily from waste materials; but making puzzles is only for someone who really enjoys woodworking and has plenty of time. The Trash to Treasures chapter describes many ways of making do with junk materials.

Could we find someone who might donate this second-hand? Many schools have parents or friends who regularly bring in such items as stuffed toys, tricycles, wagons, books, and dress-up clothes as well as all kinds of junk for creative activities. A few communities have set up central gathering places for donations of all kinds of castoffs to be used by day care centers, day care homes, and nursery schools. Sometimes an article in the paper on specific needs will bring donations which can be used. (One item often available is paper in a great variety of sizes and colors donated by newspapers and printers.) On the other hand, many things which schools need are not found in the average home or business.

Could we buy it second-hand? This question is not applicable to furniture. Often kitchen tables can be cut down to serve as lunch and work tables, old bookcases can be bought for storage (or turned on their sides and used for lockers), colorful rugs in good condition can be bought second-hand, if cleaned before using. However, an item such as a rocking boat just isn't available used. Again the time taken to go to sales, and to clean and paint the items must be balanced against the savings in money.

Could we beg, borrow, or steal it? The reader can probably see that at least some of the authors of this book are used to shoestring budgets. (One once started a school with a cash outlay of $180.) Sometimes there are people who are willing to make a donation of a large item such as a piano, a station wagon for transporting children, or a dishwasher. Ask around to see if there are foundations, church groups, or well-to-do individuals who might be interested. One might also look for groups with furniture or large play equipment in storage which might be borrowed, or people who are going out of town for a year and would be willing to lend climbing equipment. Most libraries will lend books to schools on a long-term basis. As for stealing, so far we have limited ourselves to taking from piles put out at the curb for the trash man and have come back to school with such treasures as a huge Steiff tiger needing only new eyes, a child's rocker in excellent condition, and large bunches of dried moneyplants for the science corner. (Nursery school and kindergarten teachers are rarely bothered by false pride.)

Purchasing Equipment

When the priorities are clear and decisions have been made as to which items cannot possibly be obtained in any other way than by buying them new, the person in charge of purchasing should be sure that every permanent item purchased is of excellent quality, will withstand years of hard treatment, can be easily maintained, and is as efficient to use as possible. For example, if it is decided to invest in tables designed for young children rather than cutting down second-hand ones, the teachers will not only want to see that they are sturdy with washable tops but also will think through carefully the questions of what size and shape table will best fit their program. A school which emphasizes individual work may want many small tables which children can move about themselves into quiet corners. Small group activities are often easier to work with at trapezoidal or half-circle tables. Weight of tables varies a great deal and needs to be considered. Similar thought should be given to each item purchased.

Most school supply houses have catalogues with good illustrations and descriptions so that it is possible to judge a good deal from the pictures. However, it is even better if one can see the actual furniture in an existing school and also get some idea of the kind of service which the company offers. The choice of a company is also affected by prices (compare across catalogues), distance (to save on freight costs), and on whether discounts will be given on large orders. In some places groups of schools have gone together to buy equipment and materials from companies which offer larger discounts (sometimes as much as 10 percent on orders over $1,000).

Teachers new to the job of purchasing should be warned that many companies which sell directly to schools are usually swamped with orders and slow to deliver, especially in the summertime. Orders should be put in as early as possible; and if a guaranteed delivery date cannot be given, local suppliers should probably be used for absolutely essential items. Starting with a new group of children is difficult enough without having to get along without furniture or toys.

Long-Term Considerations

Lists of priorities set up one year should be kept to the next, with notes made as to what equipment was acquired and what discarded, making the buying job much easier the next year. When it is anticipated that the school will need some expensive equipment in a year or so (such as replacing chairs or getting a new junglegym), it would be good to hold back some money each year for its eventual purchase.

STAFF

Desirable Staffing

Except in a few well financed schools such as university nursery schools or demonstration centers, one rarely finds the ideal staffing pattern. Obtaining and keeping enough effective staff is the most difficult and at the same time the most important task of the administrator of a school for young children. The first step, however, is deciding what the ideal should be.

Desirable staff ratios. With a typical group of 15 to 20 three- and four-year olds, it is difficult to run a program which really meets the needs of individual children without three people with the children during most of the day. For many people who are used to the typical kindergarten or grade school situation, one adult to five or six children seems like an unnecessary luxury. In practice three people can keep very busy watching out for the safety of this many small children, seeing to their social-emotional needs, *and* continually providing educational experiences. Further, with less than ideal space arrangements or several children with special needs in a group, even three people is often not enough to really cope with everything going on in the group at certain times. In the kindergarten, many groups of 30 to 35 children are run with only one teacher; but it is very difficult to do group teaching, much less diagnostic work or individual teaching in such a situation. Many public schools now provide each teacher with an aide and try to keep groups to 25.

COMPETENCIES IN CLASSROOM TEACHING[2]

PERSONAL CHARACTERISTICS

H, A, T[3]	Shows promptness and reliability with regard to classroom assignment and related meetings. Can be counted on to handle routine responsibilities.
H, A, T	Enjoys being with children and finds the role of the teacher rewarding. Basic motivation is to enable children to learn and grow.
H, A, T	Demonstrates an active interest in individual children. Shows an appropriate positive, warm, and responsive attitude to children. Respects them as individuals.
H, A, T	Voice is clear, easy to understand. Vocabulary is appropriate, not condescending.
H, A, T	Voice level is usually used effectively, as a teaching tool and for limit setting.
H, A, T	Shows a realistic awareness of own personal and teaching needs, values, strengths, and limitations.
H, A, T	Shows an active interest in learning and growing as a teacher.

PROGRAM PLANNING

H	Able to state goals for class and individual children, both short- and long-term.
H, A	Plans sufficient appropriate activities in advance and is prepared to carry them out, i.e., has equipment set up in advance, has anticipated contingencies that may develop, is prepared to conclude activity appropriately.
H	Considers both group and individual needs in planning. Program planning shows balance of cognitive, motor, emotional, and social goals.

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[2] Developed for use in teacher training at the Graduate School of Education, Rutgers University.

[3] H = Head Teacher, A = Assistant Teacher, T = Trainee

H, A	Has a growing repertoire of activities, is imaginative in creating new ones, or is aware of resources for locating activities. Knows where to obtain and how to make classroom materials.
H, A	Shows flexibility in changing plans as necessary and is resourceful in substituting one activity for another if this becomes necessary.
H, A	Is able to arrange room for effective use and maintains it in good condition.
H	Shows awareness of own philosophy of education and can articulate the rationale for it.
H	Can consider objectively philosophy of others, and has skill in rejecting, using, or adapting techniques and activities developed by others.

TEACHING SKILLS

H, A	Continuously makes use of opportunities to teach in informal situations, can extend or elaborate the learning of the child at a given moment in time.
H, A	Knows and remembers the needs of each child and provides each with materials and tasks at appropriate levels.
H, A, T	Shows good judgment as to when to leave child working on his own and when to provide help or direction.
H, A, T	Can hold the attention of most children in small or large groups. (This applies to Trainees for small groups only.)
H, A	Demonstrates a variety of techniques or approaches for helping a small group of children acquire or apply concepts.

HEALTH AND SAFETY

H, A, T	Stops dangerous behavior immediately, but is not overprotective of the children.
H, A, T	Whenever possible, anticipates possible danger and redirects children.

H, A, T	Shows alertness to health and safety hazards in classroom.
H, A	Shows awareness of possible signs of health problems in children, either temporary or chronic, and takes appropriate action.
H, A, T	Teaches health and safety rules in a positive, non-threatening way and encourages self-reliance.

LIMIT SETTING AND DISCIPLINE

H	Plans for transitions and routines and reduces problems through careful organization.
H, A	Sets a few simple, clear ground rules for the class, states them directly, and reinforces them consistently.
H, A, T	Is clear in own mind when a child can be offered a choice or when he is to be given a direction. Makes clear to child when choice is available and when it is not.
H, A, T	Follows through with individual or group on expectations.
H, A, T	Tries to avoid problems arising in one child or among children through anticipation and redirection.
H, A, T	Avoids reinforcement of negative behavior.
H, A, T	Shows ability to handle aggressive behavior in a child without becoming unduly upset.
H, A, T	Tries to help children learn positive and independent ways of solving problems and to gain insight into their own feelings and behavior. Helps them work toward self-direction.
H, A, T	Never shames a child or makes the child feel unliked by the teacher. Makes it clear that it is the child's behavior which is unacceptable, not the child.
H, A	When working with one group, is aware of what other children are doing and helps where needed.
H, A	Is able to see and remedy discipline problems caused by the environment, e.g., poor room arrangement, inadequate equipment, room temperature, etc.

RELATIONSHIPS WITH OTHER ADULTS

H, A, T	Is able to accept suggestions from supervisor, but is not unduly anxious about performance as a teacher.
H, A, T	Can share responsibilities with others, that is, can be relied on to do one's own job and help others as needed.
H, A, T	Makes active attempt to understand and accept ideas of others divergent from one's own. Has positive and supportive feelings toward associates.
H, A	Can work out problems arising in day-to-day relationships in the class.
H, A, T	Demonstrates an active interest in parents. Seeks to understand their needs and problems as well as those of the child.
H	Demonstrates skill in gaining confidence of some of the parents and in involving them in the program.

Desirable qualifications for staff. As we noted in Chapter 2 there has recently been a reversal of the move toward requiring staff to have degrees in Early Childhood Education. (See *Who Should Teach?*) As we stated there, we feel that the question is not, "What kind of qualifications does the teacher have on paper?" but rather, "How much does she know about young children, how well can she teach them, and how effectively can she work with parents?" However, because we feel that it is important to be much more specific about the qualifications of staff in a preschool, we have included one description of "the competent teacher." The total list of competencies describes the desirable characteristics of a head teacher who is in charge of one classroom. The expectations for assistant teachers would not be quite so broad, while those for aides (whom we call trainees) would be still narrower. On the list the expectations appropriate to each have been identified by the letters "H," "A," or "T." Ordinarily there should be one person from each level in a preschool classroom, and one from each of the first two levels in a kindergarten.

Desirable relationships between staff. The relationship among staff working in a preschool is often described as "teamwork," but at its best it is a much more intimate relationship than that. Teachers who work together for a period of time, who like each other, and who have basic agreement on philosophy, often arrive at the point where they almost read each others' thought or at least need no more than a look and a gesture to communicate across the room a message such as, "Tom and Jennifer are about to come to blows. Can you divert them?" They support each other in the difficult job of meeting the needs of all the children, and are also concerned with each other's needs. For example, when one is feeling low, the others try to reduce the pressures on her, knowing that she will do the same for them another day. Although they may not be in complete agreement about everything, and may possess quite different kinds of skills and background, they can work together because of respect and liking for each other.

Making the Best of the Less Than Perfect Situation

Not Enough Staff Members

One professional obligation of the concerned teacher is to interpret to administrators the importance of adequate staffing, pointing out the ways in which her program could be improved if, for example, an aide could be hired for the kindergarten or a third person for a preschool group. However, there are several things which can be done to use existing staff as effectively as possible; and even with adequate staff many of these ideas can make things run more smoothly.

First of all the teacher can try to get extra volunteer help (or possibly paid help) at certain times of the day to give a chance for more individual contact between teachers and children. An extra person an hour each morning would make it possible to have small group time and a period when teachers could really work with some individual children each day on their special needs. It is important, however, to have the time of this extra person carefully planned each time she comes. Too often volunteers stand helpless without direction when they could be reading to a child who needs practice with English, or playing a game, or supervising an art activity.

A second way to increase staff efficiency is to plan for division of responsibility in the classroom at any given time. One of the most frequent problems in classrooms is a lack of clear understanding as to who will be responsible for what. This results in the kind of situation where three teachers converge on one child who is having trouble getting his boots off, while a few minutes later no one notices that two children are sitting on a third and pulling her hair. One way which is often used to handle this is to have each person responsible for an area, but this may end up with one teacher supervising 14 children in the block corner while the other teachers each work with two children in the doll corner and art table respectively.

We have developed an alternate system known as the "floater" system, for lack of any better word, which seems to work very well. One teacher is responsible for the overall functioning of the room. This involves handling conflict situations, helping to move wandering or bored children into new situations, keeping track of who has gone out to the bathroom, and deciding when it is time for transitions. Ordinarily she will move from place to place and group to group keeping an eye on everything and trying to predict what will happen next. When everything is peaceful she may sit down where she can see the total room or she may involve herself in interaction with one or more children but never in such a way that she cannot see what is going on or move quickly to another part of the room if necessray. For example, she might stand by the easel and talk to a child who is painting; but she would not sit down and start to read a story.

In the meantime the other teacher or teachers and volunteers in the room will be free to work with small groups or to become involved in working with an individual child, without having to worry about what else is going on in the room. In the case of two problems arising at once, it is the responsibility of the floater to decide who is least involved and ask that person to help out. For example, if Manuel has just spilled the paint and Michael runs out of the room, the floater may decide that it is better for the teacher playing lotto to remain where she is, while a volunteer who has been helping a child with a puzzle helps clean up the paint and she herself goes after Michael. In the case of the classroom where children must be taken out to the bathroom or to snack, the floater must ask someone else to act as floater while she is outside. It should be noted that the role of floater will ordinarily shift from day to day or from one hour to the next. Note that in the sample program plan in Chapter 9, the teacher who served as floater for the free play period switched to run the story group during the same morning. (See *Program Plan, Sample.*) The floater should not be always the same person since everyone will want to have turns at the more rewarding and less strenuous activities of working with small groups and individuals. However, the floater must always be someone who knows the children and is skilled in working with them--not just an occasional volunteer.

An additional method of improving staff efficiency is to reduce outside interruptions by limiting incoming calls for staff to emergencies during class hours, by having calling times for parents outside class time, and by developing routines for handling visitors. The teacher can also check classroom arrangements and schedules to be sure staff time is being used as efficiently as possible, avoiding unnecessary trips to the storeroom, taking off coats and boots at 9:00 and putting them back on at 9:30, etc.

As quickly as possible the staff should also develop simple procedures for routines which everyone understands and follows through on. The time a teacher must spend telling children each day to wash hands after painting or what to do with their plates after eating is time taken from more important activities for both teachers and children. Further, taking responsibility for their own routines is an important move toward independence for children.

Finally, teachers can try to find time for all preparation of materials and major cleanups before and after class time, *or* can involve children in preparations and cleanup as a learning experience so that teachers spend as much time as possible with children.

If Staff Lacks Adequate Training or Experience

A diagnostic approach is just as appropriate to helping teachers work more effectively as it is to helping children to learn. When a staff member or group is not functioning as effectively as desirable, the approach should be to assess strengths and needs and to plan for growth. In practice this usually requires a director or an educational coordinator who can work with staff individually and in small groups. It is possible, however, for the process to be initiated by the staff themselves. Each person can use the list of skills which she should have at the level of head teacher, assistant teacher, or trainee; can decide for herself those on which she needs help; and can ask for help from the rest of the group to start the learning process.

Obviously any attempt to learn and change requires effort on the part of the teacher. This effort will only be put forth if the teacher sees the assessment by the director not as critical or derogatory, but as based on a real respect and liking for her and a desire to help her become more effective. Just as a teacher says, "Mike is learning red and green," rather than "Mike doesn't know his colors," an emphasis on learning the skills necessary to move from assistant teacher to head teacher--rather than emphasizing deficiencies--makes for a very different learning atmosphere. If the philosophy of the school is that everyone needs to be continually learning if the school is to become a better and better place for children, then change becomes a group endeavor, not something imposed on someone who is failing. How might a school go about this process?

Assessment. Have regular times for self-assessment and assessment by the supervisor based on the specifics listed on the qualifications sheet. When there are differences of opinion, such as the feeling on the part of the supervisor that the teacher is not spending enough time in program planning, while the teacher feels adequate in this area, the administrator may find it necessary to be content with moving slowly and not expecting rapid change.

Setting goals. Set clear and practical goals for relatively brief time periods. Especially when completely untrained staff are involved, it would be unrealistic to expect them to achieve all the learning necessary to be effective at the trainee level in a very brief period. Rather, it would be better to concentrate on a few basics and move on to others in a few weeks. For example, it might be decided to concentrate at the beginning on learning how to work with children in a small group situation rather than on learning how to prepare materials, because working with the children in a teaching situation is likely to be seen as more motivating and as having more status than mixing paint.

In-service training. Set up in-service training which is directly related to the goals set. In-service training has come to be recognized as a must in many programs; and a great deal of time, money and effort is often spent on it. Unfortunately, such training is often imposed by outside agencies without any knowledge of or concern for the particular needs of any given teacher or group. While teachers may often gain in morale from the chance to be away from the classroom and to meet with teachers from other settings, such sessions are often of little help in meeting their particular problems.

Ideally, the setting of goals by teachers and groups would be followed by practical, realistic planning for growth and change. Some typical problems and possible solutions will illustrate this point.

Problem: A trainee finds that she tends to lose the children at story time and that those who stay do not seem to enjoy the stories.

Plan for Training: Three suggestions are made.

1. To observe a more experienced teacher and try to decide how she presents the story, what kinds of books or stories she chooses, and how she handles problems and interruptions.
2. To talk to other teachers and read about how to choose books which hold children's interest. (See *Books in the Nursery School and Kindergarten.*)
3. To choose books based on what she has found out and read them to a smaller group than before, with the experienced teacher watching to give practical and positive suggestions.

Problem: A trained head teacher used to kindergarteners is having problems working with a retarded child who is operating at about the two-year-old level.

Plan for Training: The group comes up with the following suggestions, recognizing that the problem is a difficult one and may need further work.

1. The teacher should observe this child in his own home and some children who are actually two-years-old and try to decide what are reasonable expectations for him. She should also observe the mother's techniques in working with him and assess how well they work.
2. She should try to look at herself objectively in her interactions with the child to see whether she is expecting too much and whether her techniques of working with him still seem appropriate.
3. If this does not seem to be very helpful, a teacher from another group might be asked to observe the child in the classroom to make suggestions.
4. Finally, someone with considerable background in working with retarded children who could observe and serve as a resource could be brought in.

Problem: An assistant teacher would like to apply for the job of head teacher, but she feels inadequate in dealing with parents.

Plan for Training: This plan for action would be expected to take two or three months and involve a variety of educational experiences.

1. Arrangements would be made to involve the teacher in increasingly more responsible roles in working with parents, first taking over the greeting at the beginning of the day and being responsible for some routine calls home. Later she would interview prospective parents, take over some of the "easy" parent conferences, and send out a parent newsletter. Finally, she would deal with crisis situations and difficult parent conferences

and would handle parent meetings. Throughout this process the head teacher and director would be available for discussion and suggestions and emotional support when needed.

2. At the same time, the teacher would be directed toward reading material which might be particularly helpful.
3. In addition, when a workshop on parent involvement is presented at a nearby college, arrangements would be made to permit the teacher time off to attend and the opportunity to consolidate her learning by reporting back to the staff.

Summary of sources of help. A range of possible help should be available for any training need. This help would include reading materials, outside consultants, and outside training such as classes and workshops. However, the greatest strength should come from within the school where co-workers help by providing know-how for each other. Not only should the head teacher see the helping of assistant teachers and trainees as a major responsibility, but also assistants and trainees should see that they too have special know-how and insights from which the head teachers and directors can learn. Too often these sources within the school itself are not even considered in looking for help with training.

Poor Relationships Among Staff

Everyone in the field knows of situations where the children in a group have suffered because of disagreements or lack of communication between the people who work with them. At worst, one sees classrooms in which one teacher tells a child to do something and another tells him he does not have to do it, in which two teachers talk about the third behind her back, or in which untrained staff complain that they are given all the dirty work.

Obviously, because teachers are human beings, the ideal situation described earlier of a team who respect and support each other is difficult to achieve. However, teachers have two things going for them. One is that people who enjoy working with children are usually more likely to be warm, relaxed, and to have a sense of humor than the average person. As one observer in a nursery school commented, "Nursery school teachers are nicer than other people." The other strength is that teachers have the model of what they are trying to teach children always before them. The teacher might say to Bennie who is pulling Julie's hair as she tugs at his doll, "Can you tell Julie that that is your doll and help her find another one?" By analogy, rather than using the silent treatment (an adult equivalent of pulling hair), the teacher would say to Mrs. Collins, who refuses to clean up spilled paint, "Nobody likes to clean up messes. I wonder if we could do something to keep the children from spilling so much and figure some way to divide up the cleaning so nobody gets stuck with more than their share."

However, developing relationships among staff is not easy. It involves much more than just trying to be nice to each other. It requires finding ways to know and respect each other's strengths; to develop a helpful tolerance for the other's needs; to communicate feelings in ways which will be helpful, not hurtful; and to approach the solution of specific problems. How can a group of teachers possibly work toward such Utopian goals?

The first necessity is time. As we have stressed before, it is essential for teachers to have the opportunity to talk together when children are not present for brief daily periods if at all possible, certainly for at least one leisurely meeting each week. This is difficult to achieve, particularly when there is the weekly program planning and the discussion of individual children which must be covered, but time spent in getting to really know each other is essential. In a half-day school or a two-session kindergarten, eating together several times a week may be the answer. In a full-day session, nap schedules should be arranged so that teachers from the same group will be able to leave the nap room at the same time to provide time for talking together. Perhaps an occasional late afternoon or evening session can be arranged. (We do recognize that most teachers have family pressures and that any plan for finding time for communication will not work if anyone feels resentful of the time taken.) As much as possible, even informal meetings should be on paid time; and staff should be warned of the time required for such sessions at the time that they are hired.

Second, the teacher must find ways to communicate feelings without building up resentment in the other person. Such communication has to be based on a period of getting to know each other in a positive way. Teachers would not start out the first week of school "expressing feelings," but rather wait until a relationship has been established.

The number of positive comments must always be greater than the number of negative ones. In fact, one author on human relationships has suggested that a five-to-one ratio of positive to negative is a minimum for maintaining good feelings between people, whether they be teacher and child or teacher and teacher. (Obviously, a teacher should not keep a tally and say, "Aha, I've given her five compliments, now I can tell her off because she's been late the last three mornings." *The basic idea is that it is important in many cases to let people know how one feels about things that annoy, but it is much more important to let them know how one feels about things they do right.*)

Whenever possible, the teacher should follow her expression of negative feeling by raising the question of how the other person feels in the situation and what can be done about it. In the case of the teacher who is always late, for example: "You know, Linda, things get pretty hectic around here when I have to cope with the kids myself. Do you think we could talk with Mrs. Barnes about rearranging schedules if it's too hard for you to make it by nine?"

This leads to the question of using a problem-solving approach for conflicts between teachers as well as between children. At the time of an incident, it may not be possible to use such an approach; but plans need to be made for doing so later. If two teachers find themselves glaring at each other over the head of a child whom one feels should be made to sit in a chair while the other sees a reminder as more appropriate, one might say to the other, "Let's do [illegible] your way this time, but let's talk about it at nap time. It's not good for the kids for us to disagree." A little later, over coffee, tempers may have cooled a little; and the problem can be considered more calmly.

Similar processes can be used to solve any problem, whether it relates to a single issue which arises once such as, "Shall the children go out or stay in on a cold foggy day?" or to a continuing problem based on a difference in philosophy such as the way to handle a child's temper tantrums. First, someone needs to state the problem. This includes not just the question to be resolved, but all the important factors, including the emotional ones. This statement of the problem must be discussed, clarified, and accepted by the people involved. For one teacher to say to another, "I think this is the way you feel about this situation," does not help if the second teacher does not really feel that way. She has to be able to say, "No, that's not so. It's not that way at all," and explain how it is. Finally, taking into account how everyone feels about the situation as well as the practical aspects, the group tries to find a solution which will either resolve the problem to everyone's satisfaction, or if this is not possible, provide a compromise which both sides see as a fair one.

Obviously, to be able to express feelings this freely, to be willing to put oneself in the other's place, and to be willing to give as well as to take is very difficult. This process cannot work unless everyone involved is more concerned about the good of the children and the school than about their own needs and feelings. But it *can work* where there is a basis of mutal respect and liking.

For an example of how this problem-solving situation might work in practice, let us go back to the common problem of cleaning up paint or other messes in the classroom. Because of the unfortunate feeling in our culture that cleanup is a low-level job, it has come to be seen as demeaning and to be avoided if at all possible. (Maybe one reason that cleanup is such a problem with children is that they sense the frequent distaste of the teachers.) Trainees or volunteers tend to resent being asked to do it; head teachers feel that the others are uncooperative and negative if they refuse or do it grudgingly. How might this be resolved in an actual setting?

Stating the problem. Whoever is willing to make the first leap might state the problem. (The setting is important, however. If there is a regular time and place for solving problems of all kinds in the regular staff meeting, it will be possible to follow through on the discussion--not leaving it hanging in the air before feelings have been thoroughly expressed and clarified.) For example, Jean, a head teacher, might say:

> I think our feelings about cleaning up are getting in the way of our teaching. I know I'm getting upset over situations which really aren't that important. Take this morning when Tammy dropped that box of beads on the floor; I think Mary and I each thought the other one should have picked them up. And yesterday when Jackie broke the glass full of milk, I felt that Liz (the housekeeping aide) was very angry at having to mop it up, but it seems to me that's part of the job. How do you all feel about it, and what can we do to keep from continually being annoyed with each other?

Discussion and clarification. Mary comments that she was angry in the bead situation, not because she felt that Jean should have picked them up herself, but because she felt that Tammy should have been expected to do it: "We just wait on the children too much around here; it's not good for them." Liz brings out her feelings of frustration at being asked to deal with emergency cleanup jobs in the middle of doing something else. (In the case of Jackie's accident, she was trying to get dessert to the tables.) She recognizes that routine cleaning is her job and she does not mind it, but she does not like feeling that everyone else is "too good to mop the floor."

At this point Jean restates the problem saying,

> It looks as if we need to agree on some guidelines so that we're all expecting the same thing of the children and of each other. Maybe we should discuss how much responsibility different children are able to take in cleaning up. If there's something special in a situation so that we can't follow the guidelines, we can ask for help, not just expect it. I think we all agree that everyone should do her share of the cleanup.

Arriving at a tentative solution. After considerably more discussion and venting of feelings than can be reported here, the group arrives at some guidelines. These include:

1. Children should be expected to clean up after themselves to the extent that they are able to do so. If they are working with a particular teacher, for example at an art project or with a table game, that teacher is responsible for giving whatever help and encouragement she feels is necessary (and for keeping the situation routine and cheerful, not grim). Otherwise the floater is responsible. (See *Floater System.*) At lunch the teacher sitting at the table of the child who makes the mess is responsible, even if the accident occurs away from the table. If Liz is free, she will try to help out.
2. With routine cleanup which is not the children's job (though they may help), for example putting away collage materials, the teacher who was supervising the project is responsible.
3. For mess, such as sand on the floor, water from snowy boots, or scraps of paper on the floor where no one child is clearly responsible, the floater will try to involve

> some children during cleanup time or will do a quick cleanup herself with the broom or mop, leaving major cleanup for Liz during the noon hour. (Children in many schools can play a major part in the routine maintenance of the classroom, but this depends on their age and the amount of stress teachers want to place on this kind of learning situation.)

Trying out and rethinking. During the course of the following week, the staff tries out the guidelines and returns to the next meeting ready to make some minor changes. It had taken a few days to get the children used to increased responsibility and some discussion among staff as to appropriate expectations for various children; but in general the system seemed to be working. If things don't work out this smoothly, it is usually worthwhile to try to figure out why and to keep experimenting as long as all members of the staff are willing to try. It is important to remember that this cannot work unless it is at least partly *a cooperative process. Problem solving is not imposing solutions from above.*

EFFECTIVE PARENT-SCHOOL COOPERATION

In Chapter 2 we commented on the increasing interest on the part of many parents in having a decision-making part in what happens to their children in school. It was also noted that the relationships between teachers and parents will vary greatly from one school to another. (See *Who Should Teach?*)

However, whatever formal role has been set up for parents in her particular school, the teacher should be concerned with certain aspects of cooperating with parents. Recent research has shown that what parents teach children at home, if not more important, is just as important a part of their education as what goes on in the classroom. Therefore, if the teacher is to help children to develop as far and as fast as they can, she needs to make the most effective use of the home as possible. Looking at it from the parents' point of view, of course, they should be seeking at the same time to make the most effective use of the school. Putting these two together, we see the education of the child ideally as a cooperative venture between parents and the school, in which each can help the other.

Unfortunately as with every aspect of her job, the teacher is often pressed for time. In a few pioneering situations, teachers have been released to spend half their time in the classroom with the children and the other half in homes helping parents learn more about teaching their children. The teacher who helps parents become more effective teachers learns at the same time some new insights into how to work with the child herself.

Even with relatively little time available, the teacher should still be aware of three kinds of tasks which she has relative to parents.

Becoming Aware of Parents' Goals

In some settings parents will make very clear to the teacher from the beginning what their expectations are for the school. In a parent co-op or Head Start program, the teacher will often be hired on the basis of the extent to which her goals for children coincide with those of the parents. However, even in this situation teachers should be aware that the goals defined by the leaders of the group may not be the same as those held by a particular parent. For example, in talking about teaching language we pointed out that not all Spanish-speaking parents wish the same kind of language program for their children.

In many other cases, especially when the teacher is hired by the public school system, the teacher has no idea of what the individual parents want for their children. Exploring the parents' goals, then, should be one of the major concerns of the teacher in the first interview with the parents. She might ask, "What do you hope Henry will get out of school this year? Are there some things that you would particularly like him to learn or ways in which you hope he will grow?"

Of course the teacher is never going to be able to meet all of the parents' expectations; but it is very helpful to her to understand them, and to try, as far as is possible to help the child grow in ways which will make family relationships more positive. She may also need to help parents change unrealistic expectations or see that many other areas of development are important as well.

When there is a clear conflict between the expectations of parents and what the school sees as desirable goals for the child, it may be important for teacher and parents to discuss this openly early in the year. In some cases there may be alternate placements with which parents might be more happy. In others some kinds of compromises might be reached so that the school can move somewhat in the parents' direction while the parents accept somewhat less than they would like from the school.

Let us take, for example, the question of academic work in the preschool. Suppose that a teacher who takes an intermediate position on the teaching of reading and math to four-year-olds is faced with two parents, one of whom wants her child to read *now* and the other who wants her child free of any contact with letters and numbers until kindergarten. The teacher might suggest alternate placements where the philosophy would be more like that of the parents. However, if this was not feasible due to expense or lack of openings, she might suggest that she would try to provide extra pre-reading experiences for the first child and to avoid suggesting that the second child take part in any such games. However, she would have to emphasize that it is not acceptable to her either to put pressure on the first child to learn to read, or to tell the second child that he could not play a letter recognition game if he wanted to join one.

Keeping Parents Informed and Involved

If they are familiar only with grade schools, many parents expect contacts between school and home to involve only formal grade reports and phone calls or notes when something is going wrong. It sometimes takes considerable effort to help parents be comfortable with frequent school-home contacts. For this reason, the teachers need to initiate many informal and positive contacts with the home from the very beginning. In many schools teachers make a special effort not only to send children's work home, but also to frequently add a comment in writing, such as, "Dana really had fun painting this picture of our guinea pig." If the mother comes for the child, the teacher may illuminate the child's morning by commenting, "Robbie got all the way to the top of the junglegym today," rather than taking the time to talk about the weather or saying "Robbie was a good boy this morning."

Frequent simple newsletters can be very effective if the school has access to a ditto or mimeo. These can include all kinds of news about what the class has been doing and what they are going to do, as well as announcements. Each child should be mentioned by name regularly in connection with some experience which he will remember. Such news items as "Kristi and Robin made a nest out of Kleenex for the five new mice on Tuesday," and "Robert and Mrs. Dobbs went for ice cream for the party. Robert chose vanilla and strawberry," may seem minor; but to the child and his family they make the school experience come alive. With some groups of parents it is important to report not only what the class has been doing, but also the educational reasons for doing it.

Bringing parents actually into the classroom is also important, but teachers must be realistic in the time and the kind of volunteering which she asks from parents. Some may not find it easy to come to visit or to help out, but everyone should feel welcome. The teacher should make a special effort to help mothers who have special problems in getting to school to visit occasionally by suggesting that the mother bring along the baby, by finding transportation for her, or by asking if she ever has time off from work when she might come in for even a few minutes. Fathers also should be encouraged to visit whenever possible. Sometimes mothers who cannot come will enjoy helping out at home with sewing, baking, or mending projects.

Helping parents in their roles as teachers. A teacher's contribution to parent education may be directed toward helping the parents do a more competent job with all the children in the family or it may deal specifically with the needs of the child who is in her group.

The process already mentioned of helping parents think through their values and goals for children is certainly an educational one. Many techniques which help bring parents and school closer together are also directly educational. For example, in the newsletter the teacher will often follow up a description of some activity in the classroom or field trip with a brief comment as to the educational purpose of the activity. The newsletter might also include suggestions for preparation or follow-up for special activities, books which might be borrowed from the school or library (but list a lot to avoid frustration when everyone tries to take out the same book), or topics for family discussion and things to look at on family walks or trips. When parents come into the classroom the opportunity to observe how teachers work with the children and the kinds of things which children do at school can provide models for the parent. Hopefully there will be time when an observing parent and the teacher can talk a little about what the parent has seen, and she can raise questions if she does not understand or agree with something which was done. In the course of such discussion, mothers may learn that teachers are human too and can admit to making mistakes or not knowing what to do. Teachers can benefit from mothers insight also!

If it is possible to have a lending library of books both for and about children, which parents can take out, the teacher can often suggest a book which can be especially helpful. Even better is a browsing corner somewhere outside the classroom where parents can come and read and have a cup of coffee or chat with other parents. Sometimes it is possible to have paperback books available for sale or to give away free fliers from local cooperative extensions or other agencies. For parents who may not know about community services, this is a good place to have information which may be available from the United Fund or League of Women Voters. If there is display space, notices of coming events of interest to parents and children may be put up, as well as samples of the children's work or suggestions for projects which can be done at home. Depending on the resources and philosophy of the school, such a parent center may involve no more than a bulletin board or it may be an entire room which serves as the focus for a really effective program of parent involvement.

The traditional technique of parent involvement, the evening meeting, will be effective only to the extent that it meets needs felt by the parents. Programs need to be set up based on suggestions by parents as to what they would really like to see and hear. It has been possible only to touch on the whole question of parent organization and control in this manual, but such meetings should ordinarily be run by the parents themselves after the staff has helped to get the organization going. (See the Bibliography in the Appendix for further help on working with parents.)

When trying to help a parent in the education of one particular child, frequent conferences are again needed. Rather than trying to set these up on a regular schedule, with all parents being seen at stated intervals, it seems more efficient to hold conferences when either a parent or teacher feels the need. Hopefully there should always be time for teachers to talk with parents, over the phone if not in person, about their concerns or about crisis situations.

Teachers will probably want to have a conference early (possibly by phone) with mothers whose children seem to be having adjustment problems in school. Then each parent might be seen when the diagnostic inventory of her child is complete so that there could be a discussion of where the child seems to be in his development, what the school hopes to do to help him in the coming months, and the part which the parents might play in this planning and teaching. Follow-up conferences might simply be a few brief comments as the mother comes in the morning; or they might be longer, depending on need.

Again we are reminded of the perennial problem of the teacher--not enough time. However, many schools do recognize the importance of the parent conference and make time for it by providing substitutes during free play time or nap time or even by closing school occasionally to provide for conference time. Inevitably though, there will need to be occasional Saturday mornings, late afternoons, or evenings available so that the school and home can really do a cooperative job.

Chapter 11
Health and Safety

Assessment of Medical Needs

In some ways the word "diagnosis" is a touchy one because to some people it implies a medical diagnosis. We have already made clear that the focus of this is *educational* diagnosis, something which is a part of every teacher's job, and which every teacher should be qualified to do. However, we cannot ignore that there are times when the teacher will see signs of possible medical problems and will be faced with the question of what to do next. Some physicians will say that teachers should not go beyond being sure that each child in their classes is under some kind of medical supervision and has regular yearly physical examinations. They are concerned that teachers may try to diagnose medical problems and cause needless concern to parents or even try to suggest remedies for medical problems. Obviously the teacher who does this is going beyong her role and her capabilities.

On the other hand, many medical conditions can develop between one yearly visit and the next, and parents cannot be expected to be alert to all the signs of possible physical trouble. Even if a child has recently had a physical, an overly busy physician, especially in a clinic where the child is never seen by the same doctor twice, cannot be expected to observe the child in the detail which is possible for the teacher who is with the child day after day.

To take advantage of her chance for long-term, careful observation, and yet to avoid the problems that unqualified opinions can cause, the teacher needs to use great care in talking with parents about possible medical problems.

First of all she must be sure, through observation over a period of time, that her observations of the child have been accurate. The school which has a consulting nurse available is fortunate since the nurse can easily be asked for an opinion at this stage. (Schools which do not have funds for this purpose might do well to try to find a registered nurse who is willing to come in occasionally as a volunteer or to be available for questions. Often the local Public Health or Visiting Nurse may be helpful.) Obviously, if the problem is acute, long-term observation does not apply. If a child is having violent stomach pains, one does not wait around to see what happens next. Immediate decisions must also be made in the case of possible infectious diseases.

The teacher or the nurse who has concluded that a special physical problem may exist must not put a label on the problem, even if she feels that she knows what might be wrong. In talking with the parents, she will describe only the symptoms which lead her to think that there might be a problem. "I've noticed that Kate always runs or walks on tiptoe and seems to have problems climbing stairs," not "I wonder if Kate has shortened tendons." "Jim often seems very tired and pale," not "I wonder if Jim is anemic."

The teacher should also try to be as matter-of-fact and reassuring as possible in suggesting that the parents seek a medical opinion. "Probably there's no real problem, but it's always good to be on the safe side." On the other hand, if parents have financial or practical problems such as transportation in getting a child to a doctor, the teacher does not want to be so tentative that the parents fail to follow through on seeking help. If the program has a family worker, she should be familiar with the resources for help in the community, and should be ready to help the parents make use of them. When there is no social worker, the teacher herself has the responsibility of knowing how parents can get medical service and helping them to cope with the red tape which may stand in the way of getting care.

Possible Medical Problems

Below are described some of the symptoms indicating possible medical problems which the teacher will want to bring to the attention of the parents or a nurse, if available.

Vision. Symptoms that may indicate a child has visual problems include holding objects such as picture books abnormally close to the eyes or at arm's length; bumping into objects; apparent inability to see a ball thrown toward him; frequent sties or rubbing of eyes; or eyes not moving smoothly together--occasional walleyes or cross-eyes. (In young children the latter symptom may be normal, but by the age of three it can indicate a serious condition which can eventually cause loss of vision in one eye if not corrected.)

Hearing. Some symptoms indicative of hearing difficulty are failure to respond to sounds; perceiving directions wrong; cocking the head when addressed to catch the sound; continuous mouth breathing; garbled, unclear, or abnormally loud speech; or reluctance to interact with other children.

Orthopedic. Indications of orthopedic problems may include severely pigeon-toed gait; walking markedly on the inside or outside of the feet; severe knock-knees; moderate bowlegs; walking or running always on tiptoes; wry neck (head twisted to one side); or unusual curvature of the backbone--outward in the upper back, abnormally curved inward at the middle back, or curved to the side (the latter condition often causing one shoulder to be carried higher).

Skin. Almost any skin condition, rash, breaking out, or scaling, which has not previously been identified as an allergy, could be an infectious skin disease and should be checked.

Head lice. Frequent scratching of the scalp by the child may be caused by head lice.

Worms. A child with worms may be irritable, have difficulty sitting still, scratch at the anus, and in severe cases, may have frequent stomach aches.

Contagious Diseases. With the recent development of immunization for all common childhood diseases except chicken pox, the teacher is not so likely to have to be concerned about excluding the child who may expose others to such diseases. However, children still come down with strep throats and various viruses; and the child who has a fever, nausea or vomiting, or diarrhea should be sent home as soon as possible or should be isolated until his mother can come for him.

School Health Policies

Most schools exclude or send home children with the symptoms of possible infectious diseases mentioned above. However, school policies as to exclusion of children who are not seriously ill will need to vary with the situation. The most frequent problem is the common cold. If it is at all possible to keep a child with a cold at home or away from others while he is actively coughing, sneezing, or has a running nose during the most contagious 24 to 48 hours after the start of the cold, the child and the group will be better off. Ideally children who are not well should be at home, both to protect others and also because the child with a mild infection such as a cold is much more vulnerable to more serious illness. However, in a day care center or school where children are brought some distance by bus, often the best that can be done is to isolate or send home the really sick child and make an effort to keep others somewhat away from the group.

As much as possible the teacher will want to keep an eye on the child who seems flushed, pale, irritable, tired, or who fails to eat, to try to protect him from becoming overly tired, cold, or wet. The teacher should also alert the child's mother to the possibility that he may be "coming down with something."

The problem of seeking medical help directly is one which rarely arises in most schools, but for which the teacher must be prepared ahead of time. In case of a severe medical emergency or a less serious one in which the parents cannot be reached, the school *must* have the name of the family doctor or clinic and written permission for medical treatment of the child. *The school must also have a clear plan for medical emergencies so that no time is lost in deciding whether to take the child to the doctor or the nearest emergency room, and how he is to be transported. It is desirable to have at least one staff member in each school who has had a first aid course.*

In cases where parents do not have any contacts or arrangements for medical care, the regulations of the school should require that parents make such arrangements and that the child have a physical examination, if possible, before entering school. Immunizations for measles, German measles and polio are required in some states; and DPT shots are advised. Again the social worker or teacher may need to help parents find these services.

Even rarer than the medical emergency is the situation in which the school feels that there is a serious medical problem which the parents refuse to do anything about, or when there is evidence that actual neglect or abuse is going on. Even though the possibility of such a problem is rare, it is well to be familiar with the procedures for referring a child to the Child Welfare Division of Social Services or whatever agency serves the function of child protection locally. Such a referral is obviously to be made only in the case of immediate and serious emergency such as a child who has been severely beaten, or when all other approaches have failed. However, in such a crisis, one rarely has time to make the necessary contacts for referral. It is better to know ahead of time what to do, even if the information is never needed, just as it is necessary to have a plan for other medical emergencies or for fire.

The School's Responsibility for Prevention .

Another aspect of medical concern which is clearly the responsibility of the school and the individual teacher is that of prevention. No matter what the social-emotional and cognitive goals of the school are, there is never any question that the first concern of any school should be the physical safety of the children.

Most people would feel this too obvious even to comment on, and yet we see school after school where really dangerous situations exist and where serious accidents occur. There are a number of reasons for this apparent lack of safety.

The first reason is that young children are notoriously accident prone. They are active, curious and often have very little idea of what situations or substances are dangerous. For example, they may decide to use poisonous berries for play food. They also are often completely oblivious to their own limitations. A three-year-old may really believe that he can fly when he jumps off the storage shed roof, if he is wearing his Superman cape. Often teachers or volunteers who have not worked with very young children are simply not aware of the silly and dangerous things that some children will do.

A second factor contributing to a lack of safety in schools is that there is often a problem in deciding just where to draw the line on safety. Situations are not simply safe or dangerous. If a teacher wanted to avoid all accidents, she would have to keep children sitting quietly in a padded room. There is always some risk when a child climbs a junglegym, rides a tricycle, or is taken on a field trip. *The problem is to give the child a wide range of challenging experiences, while carefully controlling the situation to keep the risk of harm as low as possible.* For example, the teacher can let children climb, but make sure that there is sand or grass underneath and that an adult is always near enough to stop dangerous shoving or dares. She encourages tricycle riding, but insists on safety rules as to where and how trikes can be ridden.

Many schools for young children were not designed with safety in mind, and this presents a third factor for unsafe situations. There may be open stairwells, janitors' closets containing poisons, or a walk to the park across busy streets for outdoor play time. If a school for preschoolers is to be run in such a building, these hazards *must* be taken care of. Usually the licensing agency will demand it; but, if they do not, the staff must do so. It is one thing to tolerate risk of scratches, bumps, and bruises for the sake of educational objectives. It is quite another to tolerate any possibility of serious injury or death.

Safety Precautions

Safety in the Classroom

Throughout the activity section of this manual precautions for the safety of children have been indicated in italics to call attention to the particular hazards involved in each activity. However, the staff should set up and agree on a set of general rules and should be sure that the children understand and abide by them. The points listed below cover the most common ones (and tend to summarize the cautions repeated later), but each teaching staff should think through carefully all the possible dangerous situations which may be peculiar to their school.

1. No running is allowed inside except for running games in cleared spaces, or in the gym.
2. Pointed scissors are used by children only for special projects with a teacher at the table.
3. Block structures must be stable and not built over a certain height.
4. Pointed or sharp objects such as paintbrushes and tinker toy sticks are not to be carried around the room.
5. On cooking projects sharp knives are used only by the teacher. An adult must be at the table when fry pan is turned on or near the stove in the kitchen when children are cooking.
6. Woodworking tools are used only when a teacher can supervise, and the number of children using hammers and saws at once should be limited to three.

7. Staff should be alert to the possibility of children eating or putting into their mouths small pieces of toys, collage materials, paste, paint, or berries, and other plant materials brought in from outside. Be aware both inside and out that many everyday plants and weeds are *very* poisonous. Check school grounds to eliminate as many as possible. (See the Bibliography in the Appendix for a reference on poisonous plants.)

Safety in the School Outside the Classroom

Kitchen and janitor's closet. If children ever enter the kitchen (and we hope that they will be there frequently), dangerous items need to be out of reach. Any poisonous cleaning materials must be either in a locked cabinet, or on a high shelf which children cannot possibly reach. The same should be true of any cleaning supplies elsewhere in the building. Here some tact and follow-through may be necessary to get the janitor's cooperation. A written directive which may be resented and ignored is not enough.

Knives and other sharp objects such as ice picks and cooking forks should be stored high out of reach.

If there is a coffeepot for the staff it should be placed well back on a table, with the cord out of reach of the children. Whenever possible, cooking should be done on the back burners; and pan handles should always be turned toward the back of the stove. (A description of safety precautions when children do their own cooking is included in the introduction to Chapter 18, on food activities.) Even with all these precautions, children should not be in the kitchen without an adult present *and* watching.

Halls and stairs. As we commented before in many buildings not intended for use by young children or shared with other functions, there are unprotected stairwells, elevators, or outside doors. Unless some method can be found of removing these hazards, children should always be accompanied by an adult when leaving the classroom.

Safety on the Playground

As with safety precautions in the classroom, the most important essential is a staff in clear agreement about rules and consistent in enforcing them. Again rules will need to vary with the situation, but a few will be common to any play-yard. For example, limits as to where children are allowed to go must be set. If there is a fence, this is simple; but if not, some clear boundaries must exist, such as lines painted on concrete, a rope stretched between sawhorses or some natural boundary. Outdoor play time should be a relaxing time for both children and teachers; it cannot be if there is a constant problem with keeping track of children. Areas for use of wheel toys should also be clearly defined so that running children and cycling children do not collide. Again it helps if there are actual visual boundaries of some kind.

Running with sharp objects such as sticks should not be allowed on the playground. Sand should stay in the sandpile and must not be thrown. (Aside from the loss of sand, sand on blacktop or concrete can be very slippery.)

When children climb on the junglegym or in trees (if permitted) a teacher should be nearby. If there is a high slide or ordinary park-type swings, a teacher should always supervise. (Neither is suitable for a preschool playground, but kindergarten teachers often must use an ordinary school playground.) Paint or otherwise define an area in front or in back of the swings which is "off limits" when swings are in use.

Safety on Walks and Field Trips

See *Field Trips* for a discussion of safety cautions for taking children on walks and on field trips.

A Final Caution

One general point regarding safety should be made. Precautions for the safety and health of the children should not be taken for granted. Many volunteers, cooperating students, or others who have had little experience with young children simply do not take the need for safety very seriously, even though they may otherwise be excellent in the classroom. The teacher must carefully explain rules and insist on their being consistently enforced whether the volunteer agrees with them or not.

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